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FS SERIES #5:VALUE CHAIN FINANCE

PRIMER

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FS SERIES #5: VALUE CHAIN FINANCE

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CONTENTS

ACRONYMS

DCA	Development Credit Authority
EGAT	Bureau for Economic Growth Agriculture and Trade
FS Share	Financial Sector Knowledge Sharing Project
GDP	gross domestic product
ICT	information and communications technology
IT	information technology
LPG	loan portfolio guarantee
MABS	Microenterprise Access to Banking Services
MFI	microfinance institution
MIS	management information system
MSACCO	Malawi Union of Savings and Credit Cooperatives
MSE	micro and small enterprises
MSME	micro-, small-, and medium-sized enterprises
MSOW	model scope of work
MTZL	Mobile Transactions Zambia
NAFIN	Nacional Financiera
NBFI	nonbank financial institution
OIBM	Opportunity International Bank of Malawi
POF	purchase-order finance
PROFIT	Zambia Production, Finance, and Improved Technology Program
SACCO	saving and credit cooperative
SME	small- and medium-sized enterprise
SOW	scope of work
TA	technical assistance
USAID	United States Agency for International Development
USG	United States government
VAT	value-added tax
VCF	value chain finance
WHR	warehouse receipt

INTRODUCTION

The United States Agency for International Development (USAID) Bureau for Economic Growth Agriculture and Trade (EGAT) created the Financial Sector Knowledge Sharing Project (FS Share) to collaborate with USAID missions to develop effective and efficient financial-sector programs that increase access to financial services and develop well-functioning markets worldwide. USAID awarded Chemonics International, Inc. the FS Share delivery order under the Financial Sector Blanket Purchase Agreement. FS Share has a three-year period of performance, July 2008 through July 2011.

Through the FS Share Task Order, USAID EGAT and Chemonics proactively collaborate with missions to identify financial-sector priorities and develop strategies and programs for growing the financial sector. FS Share identifies financial-sector best practices and aggregates them through model scopes of work (MSOW), primers, diagnostic tools, best-practice case analyses, and other tools. These deliverables are disseminated to USAID missions for use in financial-sector programs. FS Share can assist with implementation and connect mission staff to external resources on best practices. In response to mission demand, FS Share delivers presentations and other knowledge-sharing endeavors.

Objective of This FS Series

The objective of this FS Series, *Value Chain Finance*, is to provide U.S. government (USG) program designers with a basic technical understanding of value chain finance (VCF) and how to design approaches to increase access to financial services that promote value chain competitiveness. The FS Series includes a Primer, a Diagnostic Checklist, and an MSOW. The primer introduces, defines, and provides an overview and case examples of VCF.

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FS Share Rapid Response Hotline

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EXECUTIVE SUMMARY

The objective of this primer is to provide USG program designers with a basic technical understanding of VCF and how to design approaches to it that will increase access to financial services to promote value chain competitiveness.

VCF has the potential to enhance the impact on the development of a wide range of USAID programs, including trade and competitiveness, financial sector, microenterprise, rural and agricultural development, and food-security projects. Increasing financial flows to and between value chain actors can directly or indirectly increase the competitiveness of entire industries, benefitting specific target populations. Moreover, leveraging value chain relationships extends access to finance to smaller, seemingly riskier enterprises more rapidly and broadly than generally possible through traditional micro-, small-, and medium-sized enterprises (MSMEs) or agricultural finance approaches. At the same time, leveraging relationships also promotes overall financial-sector development. Incorporating VCF approaches does not mean discarding traditional approaches to MSME finance or rural and agricultural finance projects, but rather adding new tools to the arsenals of program designers and implementers to increase their chances of success.

Based on the case studies analyzed for this FS Series, a number of core elements can be considered "good practice" programming for supporting VCF initiatives. Conducting enhanced VCF analysis at the forefront of the program design process is critical to identifying opportunities and designing appropriate interventions to achieve specific objectives. Engaging stakeholders in both the value chain and the financial sector in a variety of ways can reduce information asymmetries, help identify profitable opportunities, and contribute to advancing needed legal and regulatory reforms. Enabling environment constraints must be addressed along with other constraints to achieve sustainability and scale in VCF initiatives.

VCF can capitalize on opportunities to leverage existing inter-firm relationships to increase access to appropriate financial products and services for participants throughout the value chain. To do this effectively, financial products and services must, at minimum, match maturities and other terms to the crop and value-added business cycle and at the production end, and allow households to meet other cash flow needs. A detailed summary of key considerations for program designers and implementers, including information about prerequisites for replication, is found in Section C.

PRIMER

This primer's objective is to provide USG program designers with a basic technical understanding of VCF and how to design approaches to increase access to financial services that promote value chain competitiveness. This primer defines VCF, and describes how finance can be an enabler within the value chain framework; it is based on a review and analysis of existing literature and resources, lessons learned, trends, and approaches, including approaches used to implement USAID and non-USAID programs.

Section A describes USAID's value chain framework, the process of undertaking a value chain analysis, and specifics about how to include a finance lens in this process to identify and prioritize VCF interventions. The primer presents USAID's and other donors' support for VCF, as well as how to integrate VCF into the program cycle. This section discusses the intersections among programming in rural and agricultural development, finance, microfinance, small- and medium-sized enterprise (SME) finance, competitiveness, and food security. Examples show how USAID's Development Credit Authority (DCA) credit enhancements can reinforce VCF initiatives to support sustainable private-sector financing models. Most important, Section A discusses the integration of VCF into program design and implementation, and presents the fundamental elements to consider when programming in this area.

Section B presents case studies of VCF interventions that are potentially replicable in other developing countries. These case studies include programs and models supported by USAID, other donors, and private financial institutions in Africa and Latin America for agricultural VCF. While most literature on VCF disseminated to date has focused on the analysis phase and recommendations for programming, the cases presented in this primer examine specific interventions designed and undertaken to stimulate VCF and results that programmers can evaluate and from which they can learn. The cases present the different types of financial products used to stimulate financing at various points in the value chain and represent interventions undertaken on different types of programs. Annex B presents concise descriptions of these and other products that can be used in VCF interventions, including warehouse receipts (WHR), factoring, purchase-order finance (POF), and leasing. Annex A provides a glossary to assist the reader.

A diagnostic checklist is included in Annex D to assist USG programmers with evaluating the preconditions and options available to integrate finance effectively to increase productivity competitiveness throughout the value chain. Additionally, an MSOW is included to provide sample language for program designers and implementers. Both are intended to be practical tools for integrating lessons learned and best practices in VCF into effective programming.

A. Importance and Role of VCF

A1. Definition of VCF

VCF has the potential to enhance the development and impact of a wide range of USAID programs, including trade and competitiveness, financial sector, microenterprise, rural and agricultural development, and food-security projects. Increasing financial flows to and between value chain actors can directly or indirectly increase the competitiveness of entire industries, and benefit specific target populations. Moreover, leveraging value chain relationships makes it possible to extend access to finance to smaller, seemingly riskier enterprises more rapidly and on a larger scale than is generally possible through traditional MSME or agricultural finance approaches. Such access promotes overall development of the financial sector.

In the absence of adequate financing, small producers and microentrepreneurs may be relegated to low-cost, low-profitability products and production technologies, with implications not only for themselves and their families, but for the growth and profitability of the entire value chain. For example, as a result of a credit crunch among microenterprises, manufacturers may be unable to secure the quality or volume of inputs needed to compete effectively in national or international markets. Similarly, limited liquidity higher up the value chain may hamper manufacturers' expansion into new markets and limit their demand for smaller firms' products. Effective VCF is grounded in an understanding of these interdependent relationships, which allow donors and practitioners to identify where to facilitate financial flows for the greatest impact throughout the chain.

Taking these relationships into account when designing financial products for value chain actors can also reduce the costs and risks associated with lending to smaller enterprises and encourage formal financial institutions to expand into these markets. For example, knowing that a microenterprise has an established relationship — even a contract — with a buyer can make that small enterprise much more attractive to a bank or credit union.

As stated succinctly by Stallard and Fries (2009), VCF "is neither a separate subset of finance, with unique or distinct products, nor is it a complex new field" (p. 1).

The term simply refers to the finance that flows to or among value chain members, including the smallest microenterprises and the largest multinational company. VCF may be direct or indirect. Direct VCF refers to financial flows between value chain actors. For example, a processor may provide cash or in-kind credit to a small farmer producing mangoes for the company. The credit is repaid when the mangoes are delivered to the processor. Indirect VCF refers to lending by a financial institution (e.g., a nongovernmental organization, credit union, or bank) to a value chain member. Some successful approaches to value chain financing are actually a hybrid of the two. For example, a bank may lend to small producers through a processor. The processor, with its established relationship with the producers, may take responsibility for ensuring that the producers repay the individual loans to the bank, thereby reducing the bank's costs in analyzing each borrower's credit risk and in monitoring individual loans.

A2. USAID's Value Chain Approach and Value Chain Analysis

The USAID programming aims to support development of the value chain approach to increase competitiveness of products and services created by the chain to meet specific end-market demand. This approach will concurrently boost industry-wide competitiveness and generate equitable economic growth to benefit all levels of the value chain. According to USAID (n.d.) "value chain competitiveness is the ability of actors within an industry to: anticipate and meet buyers' demands; identify and take advantage of end-market opportunities; [and] respond to changes in market demand or the competitive landscape" (p. 1).

This section presents USAID's value chain approach and the analytical framework for examining value chains, which will allow programmers to identify opportunities for interventions to support competitiveness. Following the overview of the approach and analytical framework, Section A2d provides more detail by adding a finance lens to the value chain analysis process.

A2a. The Value Chain Approach

"The value chain approach seeks to facilitate changes in firm behavior that increase the competitiveness of the chain and generate wealth for all participating firms" (Stallard and Fries, 2009, p. 2) with the aim of contributing to equitable economic growth. According to Campbell (2008), the value chain approach "is not appropriate for every development project or in all country contexts" (p. 4). However, programmers can consider the approach for different objectives, including competitiveness, financial-sector development, agriculture, and food security. Certain prerequisites and preconditions must be in place to implement the value chain approach, including "a minimum level of good governance and stability in the enabling environment, the existence of at least some market activity (even with low-value products or exclusively local markets), and a project goal of economic recovery, growth or poverty reduction" (Campbell, 2008, p. 4). A wide body of literature is available on USAID's value chain approach and is referred to in Annex C.

Figure 1:Value Chain Structure

Source: USAID Value Chain Development, n.d., para. 3

A value chain's structure includes all the firms in the chain for a product, from input suppliers to exporters (see Figure 1, p. 3), as well as enablers or supporting markets, which provide critical services to facilitate the flow of transactions and add value at different stages in the process (Stallard and Fries, 2009, p. 1). The value chain's activities are taking place within a national and global enabling environment. USAID programs help orient value chains to meet the needs of specific end markets — domestic, regional, or international — which determine product characteristics, including price, quality, quantity, and timing. This primer focuses on the analysis and the integration of financial services as an enabler into value chain development programs.

Box 1. Value Chain Dynamics

Upgrading: To respond effectively to market opportunities, firms and industries need to innovate to add value to products or services and to make production and marketing processes more efficient. Upgrading often requires financing.

Inter-firm relationships: The nature and quality of the interactions between value chain participants.

Value chain governance: Governance refers to the power and the ability of a firm, organization, or institution to exert control, or set or enforce parameters under which others in the chain operate.

Source: USAID Value Chain Wiki

Some of the dynamics affecting financing for value chain actors include upgrading, inter-firm relationships, and governance (Box 1). Both the structure and dynamics must be considered part of the analysis and program design phase of a VCF intervention.

A2b. Integrating VCF into the Project Cycle

Figure 2 shows the basic cycle of a value chain program. As described in more detail in the following subsections, finance as an enabler should be incorporated from the value chain analysis phase onward. A comprehensive value chain analysis and mapping exercise will identify where upgrading or other changes, such as forming linkages, will have the biggest impact on chain performance and the degree to which a lack of finance constrains this opportunity.

Figure 2: Project Cycle for a Value Chain Development Program

A2c. Value Chain Analysis

The value chain analysis process provides an understanding of the broader constraints that inhibit competitiveness, as well as specific bottlenecks. "The results of the analysis offer industry stakeholders a vision for value chain competitiveness and form the basis for a competitiveness strategy" (USAID Value Chain Development, n.d., para. 3). Value chain analysis is divided into two parts, end-market analysis and chain analysis. End-market analysis provides insight on market trends and market positioning; chain analysis

identifies constraints and opportunities in reaching the end market. Chain analysis "examines both structural and dynamic factors affecting value chain competitiveness and the depth and breadth of benefits" (USAID Value Chain Development, para. 5) across value chain participants.

Box 2. Key Value Chain Analysis Questions

Value chain analysis should focus on answering the following questions:

- What and where are the market opportunities? (end market)
- What upgrading is needed to exploit them? (end market and chain)
- Who will benefit from this upgrading? (chain)
- Who has the resources, skills, and incentives to drive upgrading? (chain)
- Why has it not happened already? (chain)
- What will it take to make it happen? (end market and chain)

Source: USAID Value Chain Development, n.d.

A2d. Including a Finance Lens in Value Chain Analysis

Enhanced value chain analysis examines enablers, including financial services, and how they affect transactions within the value chain. Finance can be a critical input, allowing firms at all levels in a value chain to upgrade or expand their operations to better serve an end market (Stallard and Fries, 2009, p. 2). Finance is one of many factors relevant to the competitive functioning of a value chain and may or may not be a constraint hindering that value chain's growth. Therefore, it is important for programmers and implementers to examine finance as an enabler during the analysis phase and look at both the supply of and demand for finance to identify constraints. Programmers can then prioritize appropriate interventions to address specific finance constraints. VCF encompasses a wide range of products, services, and arrangements that provide businesses in the value chain the capital they need to operate, upgrade, and expand. These products, services, and arrangements should be inventoried during VCF analysis to evaluate their appropriateness (USAID, 2008, p. 9).

Examining finance, either direct or indirect, to participants in a value chain is part of the overall value chain analysis process and should be conducted simultaneously. According to MicroReport #132, VCF analysis comprises the following steps:

Analyzing existing firm financing arrangements by conducting a basic cash-flow analysis on a representative sample of businesses at different levels of the value chain. This should include a review of current financing needs and mechanisms, cultural and knowledge-related factors, and the dynamics and impact of the value chain's structure on financing cost and availability (USAID, 2008, p.8). This information can be

Box 3. 5Cs of Credit

1. Capacity (to repay loan): How strong is the borrower's business? What are the cash flows? Are they realistic? What is the contingency plan if cash flows are lower than anticipated? What is the income-to-debt ratio?

2. Capital: How much equity does the borrower have invested in the business, how much would he or she lose if the business fails?

3. Collateral: What physical assets easily sold for cash does the borrower own? What is their value?

4. Conditions: How do economic conditions and the intended purpose of the loan (asset financing, working capital) influence projected cash flows?

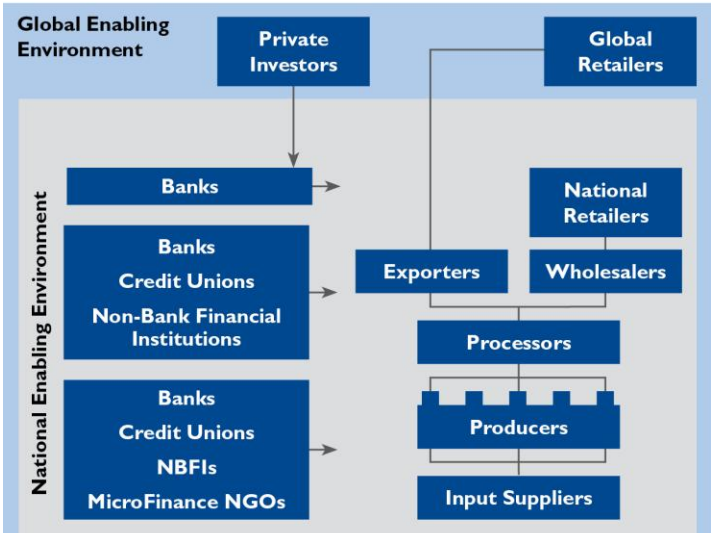
5. Character: How responsible is the borrower? What do we know about his/her financial history? What is the overall impression?

Source: USAID, 2008, pp. 9-10

collected using the "5Cs" of credit (see Box 3) often used by financial institutions for borrower credit analysis. Additional questions to ask at this phase include: Is the firm able to invest their resources in activities with the highest return? (Jansen, 2007, p. 8) Are infrastructure barriers being addressed (e.g., roads, water, electricity)? Does the firm have the best equipment/technologies available? Is the firm able to time the selling of products to obtain the highest return?

Mapping and analyzing financial services provision for financial service providers currently engaged in value chain activities and those that have potential to deliver financial services (USAID, 2008, p.8). (See Figure 3 for examples.) Questions to think about during the mapping phase include: How much do financial service providers understand the financial structure, cash flows, and risks of the market segment they are targeting within the value chain? (USAID, 2008, p. 9) Are value chain participants fully aware of the financial options available to them? What are the power dynamics in the direct financing relationships among value chain participants? Can firms, particularly at the producer level, effectively balance household and enterprise finances, and financing among and between enterprise activities?

Figure 3: Adding Finance to the Value Chain Structure



Source: Jansen and Averch, 2009

Examining how accessible financial services and products are to value chain participants in terms of geographic location, cost, efficiency, and appropriateness for the activity they are financing. Other questions to ask related to accessibility include: Are financial products designed to meet clients' needs (e.g., size, term, and time available)? Are technologies available and used to bring financial services close to the client? Are savings, credit, insurance, and transfer services readily available? (Jansen, 2007, p. 9)

Examining the finance policy environment, particularly banking regulations and contracts law and their impact on providing financial products and services to value chain actors. According to MicroReport #132, this examination should "…assess how governments can use taxation, subsidies, regulation (standards) and enforcement to influence the finance industry" (USAID, 2008, p. 10). Questions to ask in this phase include: Does the legal and regulatory environment support open financial markets? Does government actively control risk factors (e.g., foreign exchange and inflation)? Do financial institutions have accurate information on borrowers through credit bureaus and

reliable sector information? Are contracts (implicit or actual) respected and enforced? (Jansen, 2007, p.9)

Identifying optimal financial products, services, and mechanisms to support opportunities for upgrading, to improve efficiencies or support expansion. Those used frequently for VCF are summarized in Section A3 below.

A3. Value Chain Financial Products, Services, and Arrangements

Numerous financial products and arrangements may already be fully developed within a value chain or may be promoted to meet financing gaps or strengthen the competiveness of the value chain. As presented in Section A, value chain financing arrangements can be divided into either direct or indirect financing, depending on whether the financing is provided by one participant to another, or comes from an outside financial institution.

Direct financing arrangements are often intended to leverage the value chain relationship between actors. For example, in **trader credit**, input suppliers or produce buyers issue short-term or seasonal loans, usually in the form of in-kind credit, to agricultural producers for working capital for inputs (Fries and Akin, 2004, p. 8). Another example of direct financing is **contract farming** or **out-grower arrangements**, in which a buyer (likely a processor, wholesaler, or exporter) provides in-kind credit in the form of inputs and perhaps technical assistance (TA) to farmers to ensure there are high-quality crops in large quantities for them to purchase. There is usually a formal agreement between the buyer and seller, guaranteeing the purchase of the crop at a prenegotiated price, with the cost of the inputs deducted from the buyer's purchase price.

Indirect financing from financial institutions can sometimes be secured by larger, more creditworthy actors in value chains. However, in most developing countries small-scale producers and other actors often lack the credit history and collateral needed to secure financing outright. For these actors, alternative asset-based financing arrangements can be used to satisfy lenders' requirements to secure a loan. For example, **WHR systems** use the value of a producer's commodity stored in registered warehouses as a form of collateral to secure a loan, providing working capital financing and allowing them to delay selling the crop until prices are more favorable than immediately after harvest.

Box 4. WHR Program in Uganda

USAID's Rural Saving Promotion and Enhancement of Enterprise Development (Rural SPEED) program developed and piloted a warehouse receipt program in Uganda that allows maize farmers to store their crop in certified warehouses and use it as collateral for loans worth approximately 80 percent of the current grain value. As opposed to selling their crop to traders immediately following harvest when markets are flooded and prices are lowest, farmers can now wait to sell until prices increase. The program also collaborated with the World Food Program (WFP) to purchase high-quality maize for nearly double the prices possible in Uganda.

Source: Kristalsky, 2006, pp 1-2.

With **factoring,** a firm's account receivables can be sold to lenders or factoring firms at a discount in exchange for immediate cash needed for working capital, to service debt, or

to provide for personal needs. **Reverse factoring** differs slightly from traditional factoring in that the lender only purchases account receivables from certain very creditworthy buyers, as opposed to purchasing an entire portfolio of account receivables from an individual seller (Klapper, 2005, p.6). **POF** systems, in which firms submit a purchase order from a creditworthy buyer to a lender in exchange for an advance used to fill the order, has been successfully introduced in Eastern Europe and Latin America and allowed firms to access credit needed to fill large orders and grow their business.

Leasing, which can be done through direct or indirect financing, offers an alternative to traditional asset financing, in which a loan is obtained to purchase the asset. In a leasing arrangement, the lessor retains ownership of the asset — usually equipment or vehicles — charging a fee for its use by the lessee. More information about the purpose and the advantages and limitations of leasing, WHR financing, factoring and reverse factoring, and POF can be found in Annex B, Value Chain Product Primers, and in the glossary in Annex A.

A4. VCF Intersections with Traditional Approaches

While many USAID programs target smaller firms or producers as beneficiaries, the key to their sustained growth may be further up the chain. For example, if limited liquidity or access to markets among buyers limits demand for microentrepreneurs' crafts or small producers' artichokes, increasing their output through credit may lead to lower market prices and increased debt. Similarly, in the case of an SME or large-scale agribusiness project, the critical obstacle to growth or to the intervention's sustainability may be found further down the value chain in microentrepreneurs' ability to provide timely, high-quality products in sufficient volumes. In both cases, the answer may be a financial or nonfinancial intervention.

Incorporating VCF approaches into USAID programming does not mean discarding traditional approaches to MSME or rural and agricultural finance projects, but rather adding new tools to the arsenals of program designers and implementers to increase their chances of success.

A4a. Microfinance

VCF can intersect with microfinance in two ways. First, VCF analysis can be used to deepen the credit analysis conducted for traditional lending. Second, existing or potential value chain relationships can be leveraged to reduce the risks of lending to this market segment through innovative product design.

For the former, determining repayment capacity by analyzing overall household cash flows is a basic tenet of microfinance best practice. Incorporating value chain analysis to assess whether there are financial or nonfinancial constraints further up the value chain that could affect a microentrepreneur's repayment capacity (i.e., if there is a reliable market for their goods) can be seen as a simple expansion of this standard analysis. For the latter, microfinance providers can introduce products, such as POF (see Annex B), that use the microenterprise-buyer purchase order contract to guarantee a loan, or choose

to lend to microenterprises through a buyer, transferring much of the loan monitoring responsibilities to this value chain actor.

A4b. SME Finance

As in the case of microenterprise development (or microfinance), SMEs' expansion — and/or ability to take full advantage of financial services — may be dependent on the efficiency and capacity of other value chain participants (e.g., microenterprises, large processors, or wholesalers). While traditional SME finance programs focus exclusively on the accessibility and provision of financial services to SMEs, VCF takes a more holistic approach to identify constraints, both financial and nonfinancial, at other points in the value chain.

A4c. Rural and Agricultural Finance

Expanding access to finance in a rural setting is particularly challenging for myriad reasons amply detailed in other publications. Traditional rural and agricultural finance programs focus primarily on specialized financial service providers, such as microfinance institutions (MFIs) and banks. In rural areas, however, the majority of financing is typically provided by nonfinancial service providers (i.e., input suppliers and buyers). Taking these actors into account in analyzing rural and agricultural finance needs and working with these actors, as well as with specialized financial service providers, greatly expands the options for meeting the diverse financing needs of rural and agricultural enterprises.

A5. USAID's Role in Supporting VCF

USAID's efforts in this area are oriented to link value chain actors to financial services to facilitate improved performance, thereby increasing competitiveness and fostering equitable economic growth. VCF activities have been and can be incorporated into programs to contribute to achieving objectives related to competitiveness, rural and agricultural development, MSME access to finance, food security, and gender-focused initiatives. Finance can be integrated as a component of a broader program to reinforce other TA and resources.

For example, many competitiveness projects include a component that helps businesses become more "bankable" and works with lenders to provide financing that will allow businesses to upgrade their products or services. Microfinance and SME finance programs often include new-product development activities and capacity-building to help lenders enter new markets, such as agriculture, with reduced risk, including through VCF mechanisms and structures. Food-security programs can work to catalyze needed financing in value chains for food staples such as maize; an MFI may finance gender-focused initiatives to increase women's participation in a value chain, increasing income-generating activities for households. Financial-sector development programs working at a macro level may include activities that contribute to a conducive environment for value chain financing, such as drafting a country's leasing law or other laws and regulations related to pledging receivables as assets.

A5a. USAID Research and TA Programs

USAID has been using the value chain approach for a number of years and more recently began expanding the traditional value chain approach to focus on finance as an enabler. Activities have included substantial research through the AMAP Knowledge Generation project and the Leaders with Associates project, as well as piloting and implementing VCF initiatives on field projects in many regions.

Projects have analyzed agricultural value chains supported by USAID-funded projects in many countries (see Box 5), which can be useful starting points for designing programs to address identified constraints in financial services. Additionally, a number of USAID-funded field projects have undertaken VCF initiatives, including two of the cases presented in Section B, Deepening Malawi's Microfinance Sector Project (Malawi DMS) and the Zambia Production, Finance and Technology (PROFIT) Project. Additional projects implementing VCF activities are presented in Box 5.

Box 5. Illustrative USAID Value Chain Finance Activities

Implementation

- Bolivia Rural Competitiveness Activity (ARCo)
- Peru WOCCU
- Kosovo Cluster and Business Support Project
- Croatia Agribusiness Competitiveness Enhancement Project

Analysis (most available on www.microlinks.org)

- Mali – shallot, potato
- Albania – apple
- Uganda – sugar, maize, sunflower oil
- Peru – artichoke
- Mexico - mango
- Russia – leasing
- Kenya – aquaculture, horticulture
- Morocco – olive/olive oil

A5b. USAID's DCA

USAID's DCA provides partial credit- risk guarantees to private-sector lenders to encourage them to provide credit to financially viable businesses and projects that contribute to development goals. There are four basic DCA guarantee structures, but DCA loan portfolio guarantees (LPGs) have been used the most frequently for VCF activities. LPGs (see Box 6) provide a guarantee of up to 50 percent to one or multiple lenders' portfolio of loans to borrowers in a predetermined sector, such as agribusiness. LPGs are typically used to directly stimulate access to credit for underserved market segments, reduce onerous borrower collateral requirements, and stimulate competition among lenders. USAID's DCA partial credit guarantees have been used in innovative ways to help expand access to credit for value chain participants, particularly in agricultural value chains in countries including Croatia, Nicaragua, Mozambique, Peru, and the Dominican Republic.

A5c. Lessons Learned and Good Practice for Value Chain Finance Programming

Based on the case studies below, a number of core elements can be considered "good practice" programming for supporting VCF initiatives. Conducting an enhanced analysis of VCF, as described above, at the beginning of the program-design process is critical to identifying opportunities and designing appropriate interventions to achieve specific

objectives. Engaging stakeholders in both the value chain and the financial sector can reduce information asymmetries, help identify profitable opportunities, and contribute to advancing needed legal and regulatory reforms. Enabling environment constraints must be addressed along with other constraints to achieve sustainability and scale in VCF initiatives.

Box 6. DCA Catalyzes VCF in the Dominican Republic

In 2008, USAID established a $10-million LPG with a private Dominican bank to encourage lending to MSMEs in agribusiness value chains ranging from farmers to exporters. Financial institutions have been reluctant to finance agribusiness and have traditionally offered only short-term working capital loans. With the guarantee that the bank will share risk with USAID, and with USAID covering up to 50 percent of loan principal on the portfolio of loans, which will have maturities of more than one year to better match crop cycles, the bank will learn about the profitable opportunities in these value chains. The value chain participants will also benefit from the increased flow of financing by purchasing equipment, expanding production, and hiring more employees.

VCF can capitalize on opportunities to leverage existing inter-firm relationships to increase access to appropriate financial products and services for participants throughout the value chain. To do this effectively, financial products and services must, at the minimum, match maturities and other terms to the crop and value-added business cycle, and at the production end must allow households to meet other cash-flow needs to be viable. An elaborated summary of key considerations for program designers and implementers, including information about prerequisites for replication, is found in Section C1.

B. Case Studies of VCF Activities

The cases selected for this primer represent VCF interventions that were tested in the field and have demonstrated results to analyze. They were selected for their ability to demonstrate solutions at different points of the value chain using a variety of implementation approaches, financial products, and services. These cases represent two examples supported by USAID programs and two that were not supported by USAID; all were assisted by different implementing partners. The cases represent some regional diversity between Africa and Latin America, as information was not as available about interventions tested in Europe/Eurasia, the Middle East, or Asia. While all the value chains described in these cases are agricultural, they represent a variety of different crops. These cases have not been widely disseminated across USAID or its implementing partners; this group of cases includes both successful and less successful examples of interventions for programmers to consider.

Each case includes a synopsis of the country's background, environment, and value chains as the context for the tested interventions for VCF, and a description of the activities and specific approaches taken. Analysis of the results includes key findings and lessons learned from the intervention, and a discussion of the intervention's elements or approach that can be considered prerequisites for program replication. Exhibit A provides a summary of the cases.

Exhibit A: VCF Cases

USAID Deepening Malawi's Microfinance Sector Project (Malawi DMS)	Increasing access to finance by facilitating linkages between value chain actors; conducting and disseminating VCF supply and demand studies; helping develop new financial products; established and supporting a DCA guarantee
Mexico Nacional Financiera (NAFIN) Reverse Factoring	Developed an online system to link buyers and suppliers; providing more secure reverse factoring services to SMEs at a lower cost
USAID Zambia Production, Finance and Technology (PROFIT) Project	Facilitating financing arrangements between firms; providing training for banks on agricultural lending; exploring legal/regulatory framework for leasing; examining feasibility of a cell phone-based rural payment system
Paraguay El Comercio Buyer Credit Financing	MFI reduced cost and risk of financing to small-scale, single-crop farmers by using buyer contracts for soybeans as collateral and engaging silos in the identification and risk assessment of potential clients

B1. Reducing Information Asymmetries and Lender Risk to Increase VCF in Malawi[1]

The population of Malawi is estimated to be 13 million, 80 percent of which lives in rural areas and is engaged primarily in agriculture-related activities. Access to financial products, such as credit and savings, insurance, money transfers, and other financial services that economically active citizens could use to start or grow their businesses, is extremely limited. Formal financial institutions, such as banks and MFIs, operate mainly in urban or peri-urban centers, and offer limited products that are most often inappropriately structured for the business cycle of key value chains for cash crops. USAID's Deepening Malawi's Financial Sector (Malawi DMS) is a five-year project working to build an inclusive financial sector that can sustainably meet the financing needs of MSMEs in the country. To overcome the constraints and information asymmetries that curtail the availability of financial services to the agricultural sector, Malawi DMS initiated an effective model, applicable to all value chains, that was used to support VCF for coffee, tea, and cotton.

B1a. Background and Environment

Formal financial institutions have generally avoided Malawi's rural markets because of the high cost of delivering credit to rural areas, poor infrastructure, and the high perceived risk of agricultural lending. Value chain participants such as input suppliers, estate owners, processors, and traders have been extending mostly in-kind credits to smallholder farmers with the cost of financing typically covered through low farm-gate prices offered by buyers or through high input prices charged by suppliers. However, in-kind loans of seed, fertilizer, and chemicals are often less than ideal to obtain maximum crop productivity, and there was no long-term financing for plant seedlings for slow-

[1] Two key sources were used to prepare the Malawi DMS case study: 1) Malawi DMS Project's submission to the Innovations in Value Chain Financing competition; and 2) DMS powerpoint presentation at the USAID Rural and Agricultural Finance Training, Addis Ababa, Ethiopia, May 2007. These were supplemented with information collected in interviews from project staff.

maturing crops, such as coffee and tea, which can not immediately generate revenue. By limiting financing to a handful of crops with short-term repayment periods, Malawian farmers' were not able to diversify into other cash crops or finance long-term capital investments.

Tea Value Chain. Most smallholder tea growers in Malawi have individual arrangements with estate owners/processors to sell their green tea at a predetermined price as soon as it is picked. In exchange, estate owners have provided fertilizers, chemicals, and farm implements "at cost," deducting the interest-free loan from the proceeds of the green tea sold. Despite excellent credit history, with few exceptions, no formal financial institution offered smallholder tea farmers credit.

Coffee Value Chain. Fourteen large commercial farms/estates, the Mzuzu Trust (comprising five associations of smallholders), individual smallholders, and three major grower/processors account for more than 75 percent of Malawi's total estimated coffee production. Local banks showed little interest in the coffee sector, except at the large commercial farm level, and there was a significant need for more input and equipment financing for the farmer associations and individual smallholders.

Cotton Value Chain. Before Malawi DMS value chain interventions, the cotton sector at the smallholder level was the least organized of any value chain the program assisted. Although two of three ginners extended "zero-interest" in-kind loans to smallholders, the inputs offered were sub-optimal and reduced smallholder profitability while tying cotton sales to a single ginner. The ginners offered low prices, which encouraged a lot of side-selling, causing an undersupply of cotton for ginners and seed pressers. These factors made it unattractive for financial institutions to enter the market, and only cotton ginners and a few oil seed processors reported sufficient access to credit services from banks.

B1b. Objectives

Malawi DMS' approach to VCF focused on overcoming information asymmetries by identifying opportunities to increase the delivery of demand-driven financial services. The project detailed gaps in supply and demand in linking financial services to value chains, encouraged the adaptation of new technology to deliver low-cost, high-value financial products, and brought value chain actors together to discuss better ways to cooperate for mutual benefit. The specific objectives of the project's VCF initiative were to:

- Fill information gaps between value chain actors and the financial sector and disseminate data on financing opportunities in promising agribusiness value chains
- Build the capacity of financial institutions to undertake value chain analysis to contribute to developing financial products targeted to the agricultural sector
- Coordinate with other donors and governments to limit subsidies for sector capacity-building and provide financing for special sector studies to foster sustainable expansion into VCF

- Encourage financial institutions to use commercial capital to lend to value chain projects, including offering credit-enhancement mechanisms, such as guarantees
- Participate in and initiate public-private partnerships to advocate for harmonized market-oriented policies and foster synergistic relationships between actors
- To reduce the risk of loan default, assist in the design and roll-out of new demand-driven financial products by financial institutions that build on existing value chain relationships

B1c. Approach

Malawi DMS took a holistic and sequenced approach to achieving these objectives, beginning with consulting with stakeholders to identify promising but underperforming and underserved value chains. Next, the project conducted a value chain financing workshop and value chain credit demand and supply studies. Malawi DMS reinforced this approach by providing TA directly to lenders, identifying and disseminating specific opportunities to financial institutions, participating in policy advocacy work, and designing and implementing a DCA guarantee facility. Project efforts focused on the coffee, tea, and cotton value chains, but the approach and techniques are applicable to other value chains.

VCF Stakeholders Workshop. Malawi DMS brought together commercial banks, MFIs, farmers, input suppliers, processors, and other service and product providers from selected value chains to participate in a three-day workshop to learn how to conduct a market analysis using a value chain approach. The project developed value chain maps (e.g., the Malawi Tea Industry, as seen in Figure 4) that identified actors and linkages as well as described the type of financing needed at each level, whether such needs were currently met and potential product/service solutions to fill gaps. Financial institutions were exposed to opportunities to match banking solutions with the needs of current or potential clients by leveraging existing value chain relationships. The value chain participants that provided financial services were also spending more through losses that resulted from defaults caused by side-selling. Continued provision of in-kind credit in the value chains discouraged banks and MFIs from seriously entering the sectors and hence hindered growth of the sectors.

Credit Supply and Demand Studies. Based on the high level of interest generated at the VCF stakeholders workshop described above, Malawi DMS, in collaboration with the EU-funded Food Security Joint Task Force, conducted intensive VCF studies to quantify and qualify the existing credit demand and supply in the coffee, tea, and cotton value chains to help formal financial institutions move more quickly into underserved sectors with appropriate financial products and

Box 7. DCA LPG to Support VCF

Lender partners: Standard Bank and Opportunity International Bank of Malawi, and an additional bank will participate starting in 2009

Target borrowers: MSMEs not employing more than 100 people that are participating in agricultural value chains

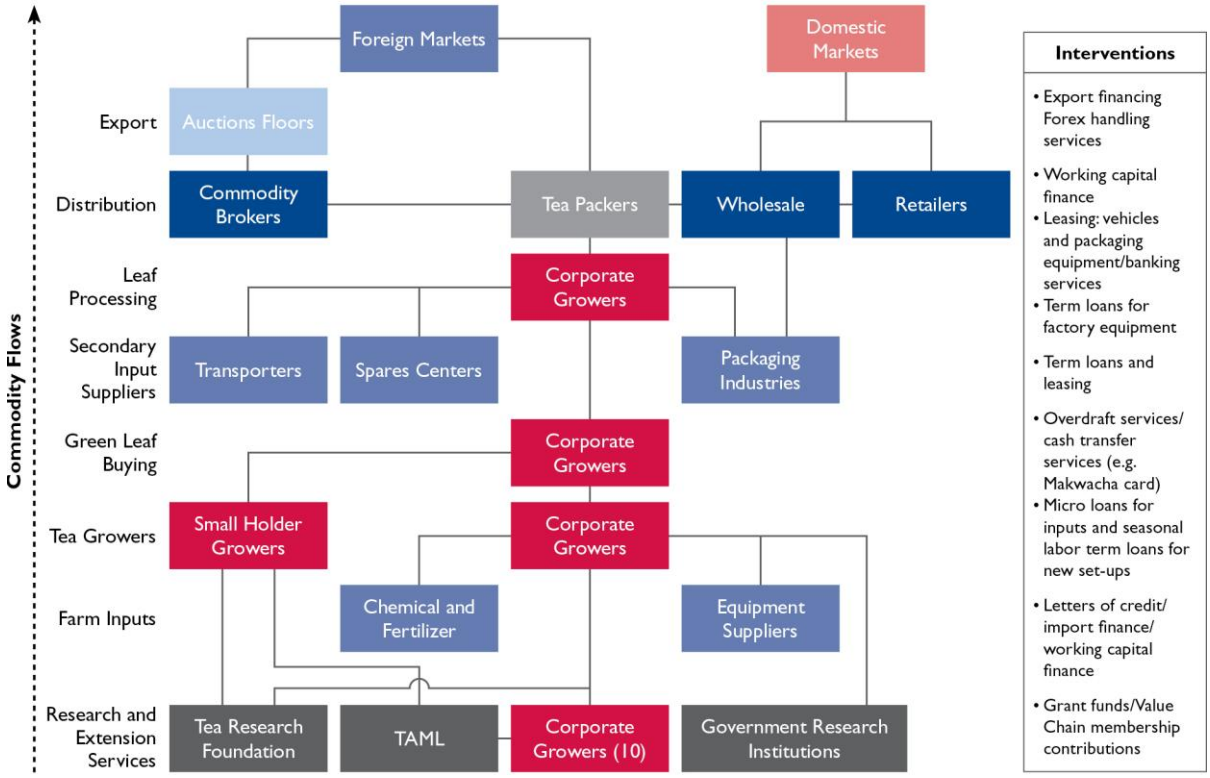
Loan size range: Less than $200,000, and averaging $25,000

Loan maturities: Up to 5 years, and averaging 2.5 years

Results to date: 26 loans worth $1,440,950

services. The findings were disseminated to the financial sector, relevant government entities, donors and value chain actors at a daylong debrief meeting, by email, and through workshops. The project also distributed the reports to its partner commercial banks and MFIs to assist in capacity-building.

Figure 4: Malawi Tea Value Chain Map



Source: Malawi DMS Project, 2007

Credit Guarantee Program. To encourage local commercial banks that demonstrate an interest in expanding SME lending but perceive a high risk in lending to agricultural-linked businesses, Malawi DMS worked with USAID to design and operationalize a $13-million multi-lender DCA loan portfolio to guarantee covering 50 percent of the risk of lending to agricultural-linked SMEs. During the DCA design phase, an even more detailed study was conducted to assess borrowers' risk. The study also provided valuable information for commercial banks to better understand the opportunities and risks in Malawi's agricultural value chains and related sectors.

B1d. Results

As a result of Malawi DMS' ongoing support for furthering VCF expansion, several local commercial banks are now aggressively pursuing loan clients from the agricultural sector. Some banks, such as the NBS Bank and FMB, have set up specialized SME lending departments that are focused on agriculture and rural enterprises. Two banks, Standard

Bank and Opportunity International Bank of Malawi (OIBM), are participating in USAID's DCA LPG facility for agricultural-linked SMEs (see Box 7). As a direct result of the project's tea sector study, at least one MFI, CUMO Microfinance Limited, has developed specialized loan products targeting smallholder farmers with no formal credit history and has made 1,922 loans worth MK19,108,469 (approximately $136,003) without a guarantee.

Evidence on the ground indicates that the Malawi DMS model is already being replicated in other sectors, such as dairy and ground nuts, confirming that value chain actors find that the model is workable and easy to implement. Its results are visible to all players in the value chain and the model ensures that all levels in the value chain grow together and in support of one another. Pilot projects by banks and MFIs to extend the reach of financial services into rural areas is occurring at an increasing pace. CUMO has proved it can profitably serve smallholder tea growers; OIBM employs its biometric card technology to extend new savings services to the cotton sector; the Malawi Rural Finance Company is working with the University of Michigan in a pilot study funded by the World Bank and assisted by Malawi DMS to use biometric cards to increase the level of savings and loan repayments among paprika farmers. Recently the project has extended its VCF innovations to other sectors, including the dairy industry. Specific results by value chain are summarized in Exhibit B.

Exhibit B: Results of DMS Interventions by Value Chain

Tea	CUMO Microfinance Limited designed a special loan product in February 2008 for smallholder tea growers affiliated with Eastern Produce Limited. The loan product operates under agreements signed with Eastern Produce Limited, Malawi Savings Bank, and the newly formed Smallholder Tea Growers Association. Under the arrangement, CUMO extends cash loans to smallholder tea growers and Eastern Produce Limited purchases and collects green leaf from the farmers and pays them through CUMO. Upon deduction of loan installments due, CUMO pays the remaining funds into the farmers' savings accounts at Malawi Savings Bank. The Smallholder Tea Growers' Association assists in confirming farmer identification. In the initial pilot program, 100 smallholder tea growers received cash loans totaling 1million Kwacha ($7,143), with 100 percent repayment. This is the first time that smallholder tea growers have accessed loans from a formal financial institution. With cash loans, the farmers were able to finance clearing, in-filling, and pruning of their fields, and purchase farm tools, chemicals, and fertilizers from any supplier they chose. In addition, some have diversified their income-generating activities to help them pull through the low-harvest months (July to November). CUMO is now reaching 1,922 of the more than 10,000 smallholder farmers in the Mulanje and Thyolo districts. OIBM and NBS Bank are actively establishing payroll-related loans and other personal financial products, and using biometric "smart cards" and mobile banking operations in the tea-growing areas of the country.

Coffee	Malawi DMS' value chain analysis of the sector identified the need for more input and equipment finance for the Smallholder Coffee Trust and individual smallholder growers. However the dissemination of the coffee VCF study generated a lot of interest at both local banks and international development banks. One of these, ETIMOS Bank of Italy, visited Malawi to investigate market opportunities in cotton, tea, and other agricultural sectors, and Standard Bank reported it was reviewing a loan request from the Smallholder Coffee Trust. The project's value chain work led three savings and credit cooperatives (SACCOs) operating in the coffee sector to join the Malawi Union of Savings and Credit Cooperatives (MUSCCO) to access credit lines from MUSCCO's central finance facility and receive TA. Furthermore, Malawi DMS identified an opportunity to expand the market through increasing domestic coffee consumption to drive further expansion in coffee cultivation. It also recommended placing a small levy on the sale of every kilogram of coffee to fund targeted industry development and expansion programs, a practice used successfully by Malawi's tea producers. This recommendation is still under consideration.
Cotton	The value chain mapping exercise revealed a lack of smallholder cotton farmer associations and that poor off-farm prices for cotton were suppressing production and encouraging side-selling. Malawi DMS hosted several stakeholder meetings, leading to the formation of a sector-wide public-private partnership called the "Cotton Development Partnership" to help organize the sector, improve research, and strengthen market information dissemination. The partnership has since been formally incorporated into The Cotton Development Trust. All levels of the cotton value chain were represented and focused on developing harmonized policies for the sector, encouraging the formation of smallholder cotton farmer associations and licensed buyers to prevent side-selling to avoid loan repayments. Technical working groups were also formed to help ensure sustainable growth in national cotton production. Most important, formal financial institutions are now fully engaged partners in the process. The project's work with value chains revealed the potential for new technologies, such as biometric "smart cards," to help register payments from sales and facilitate disbursement and repayment of loans. The smart card is capable of segmenting from total farm proceeds, an "input reserve wallet" for the purchase of inputs in the following season. Malawi DMS' partner, OIBM, began providing financial services to cotton farmers in Salima District using their smart card system, although the program was temporarily on hold as of June 2009.

B1e. Key Findings and Lessons Learned

For most of its five-year term, the Malawi DMS project has served as a facilitator and catalyst to instill a sustainable process for expanding VCF. Once value chains and the financial sector establish new ways of coordinating, the results will provide the impetus for the participants to continue working together. It is important to implement activities on a cost-sharing basis, demonstrating that the activities are, in fact, demand-driven, and public-private partnerships can be critical vehicles for continuing efforts to develop value chains. The project's model supports banks and MFIs in using their own capital to extend loans at commercial rates of interest, thus ensuring the availability of future loan capital for value chain participants.

Stakeholder workshops can be invaluable for collectively identifying and disseminating profitable business opportunities within value chains and assisting financial institutions in understanding both market analysis and design for appropriate products and services. Financial institutions are reluctant to enter unorganized value chains, especially at the smallholder level. USAID can play an important role in supporting partnerships such as the Cotton Development Trust to help value chain participants, the financial sector, and the government to promote market-driven policies and build inter-firm cooperation, which motivates financial institutions to provide financing. USAID's DCA guarantees

can provide a very useful risk-sharing incentive to reinforce other VCF initiatives and stimulate lending to value chains, as can intensive credit supply and demand studies. The successful repayment of these loans, in turn, encourages lenders to apply the same approach to other value chains.

B1f. Prerequisites for Replication

The Malawi DMS approach addressed financing constraints caused principally by information asymmetries, in which lenders were unaware of the opportunities for profitably lending to value chain actors. Often, VCF is inhibited by other factors that may be external to the value chain, such as poor regulatory or policy environments, volatile price fluctuations, or prohibitively high operational costs of rural lending due to a dearth of financial institutions in rural areas. In these instances, these fundamental constraints may need to be addressed prior to adapting the Malawi DMS approach of disseminating information to value chain actors and lenders about possible opportunities in VCF.

In order for VCF activities, such as those completed by Malawi DMS, to succeed, there must be specific quantitative and qualitative information around which to initiate discussions with value chain participants and the financial sector. VCF studies that measure both the formal and informal credit taking place, such as those initiated by the project, are particularly useful. Additionally, the environment around a particular value chain must be conducive or efforts should focus on correcting policy constraints first, as in the case of the cotton value chain in Malawi. And, to achieve significant improvements, all of the value chain actors must be fully engaged in a public-private partnership that can drive the process forward through developing and implementing well-thought-out, cohesive strategic action plans for the sector. Initial efforts focused on cash crops for export, but the approach has been and can be further replicated in other value chains, such as dairy and/or food commodities, such as maize.

While the project identified financing gaps and opportunities for lending within the targeted value chains, the products that the financial institutions developed were market-driven, based on the existing conditions and business environment in Malawi. While the project's approach of conducting thorough value chain analyses and encouraging dialogue between value chain actors and potential lenders can be replicated elsewhere, the products that develop to meet the financing needs are limited by the enabling environment of a particular country and the structure and dynamics of a particular value chain.

B2. Reverse Factoring: the NAFIN Cadenas Productivas Program

In recent years, the use of factoring has increased dramatically on a global scale as an effective and relatively low-risk and low-cost means of expanding access to working capital finance. In developing countries, however, traditional factoring, whereby a supplier firm sells *all* of its accounts receivables to a factor in exchange for immediate liquidity, faces two key challenges: the lack of readily available credit information and insufficient protections against fraud. In the absence of credit information on each of the supplier's customers, it is difficult, if not impossible, for the factor to adequately assess

the risk of a customer failing to pay an invoice. Additionally, fraud, in the form of fake receivables and customers is not uncommon. In Mexico, however, the state-owned development bank, Nacional Financiera (NAFIN) has demonstrated how traditional factoring can be successfully adapted to the characteristics of developing countries.

Since September 2001, NAFIN has provided SME suppliers with automated (reverse) factoring services through its *Cadenas Productivas* (Productive Chains) program, which links small suppliers to "big buyers." Through the program, small, risky enterprises that lack access to formal credit are able to use their receivables from big buyers to secure working capital finance. In effect, their credit risk is transferred to their lower-risk customers.

B2a. Background and Environment

MSMEs account for roughly 99 percent of registered enterprises in Mexico (or approximately 600,000 firms), with an estimated 1.8 million more operating in the informal sector. SMEs contribute 64 percent of employment and 42 percent of gross domestic product (GDP).

Despite the clear importance of MSMEs to the Mexican economy, Klapper cites statistics indicating that the typical Mexican SME receives only 1 percent of its working capital from banks (Klapper, 2005, p. 15).

B2b. Objectives

NAFIN was created in 1934 to promote Mexico's industrial development. Today, it has two principal objectives: to promote the development of SMEs by providing financial services, training, and TA; and to develop financial markets to better serve SMEs. To achieve these objectives, in 2000 and 2001 NAFIN introduced new programs oriented toward SMEs — including the *Cadenas Productivas* program — as well as a strategic information technology (IT) plan to facilitate a dramatic expansion in the number of SMEs served by the entity. The *Cadenas Productivas* program leverages NAFIN's phone- and Internet-based systems to link SMEs with large enterprises in productive chains and provide SMEs with electronic factoring services to provide them with needed liquidity.

B2c. Approach

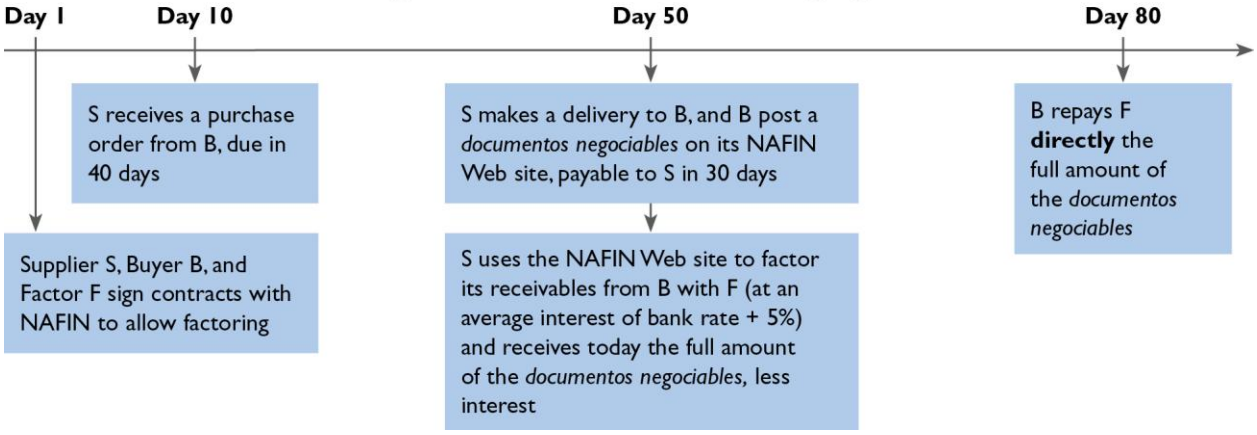
In traditional factoring, the small supplier transfers its accounts receivable from all of its buyers to a factor. The factor must then analyze and assume the risk of non-payment for each account receivable. While this can be an effective way of financing small businesses — shifting the risk analysis from the riskier small supplier to larger, less risky buyers — it requires the factor to collect credit information on a large number of buyers. This can be a difficult and costly task in environments lacking robust credit bureaus. Weak legal systems that make collection in case of non-payment difficult further increase the risks of traditional factoring in developing countries. As a result, factors generally buy accounts

receivables "with recourse," meaning the small supplier is held accountable for a buyer's non-payment.

In contrast, under NAFIN's reverse factoring program, factors purchase the accounts receivables of only the larger, most creditworthy buyers. Large buyers, registered with the *Cadenas Productivas* program, provide NAFIN with lists of their suppliers (i.e., the small firms holding their accounts receivables), who are then invited to register for the factoring service for their respective large buyer. Working with only the large, established buyers reduces both the cost of assessing accounts receivable risk and the risk of non-payment itself. As a result, all factoring services facilitated through NAFIN are provided "without recourse."

Factoring transactions are completed through NAFIN's electronic platform, which reduces transaction costs and improves security. The platform also facilitates the participation of all commercial banks in the program and introduces the element of competition for suppliers' receivables. NAFIN covers all costs associated with the electronic platform and legal expenses, such as document preparation, signing, and transfers, out of fees paid by lenders for their services. As a result of this subsidy, banks only charge interest, no fees, for the factoring service. Until July 2004, NAFIN capped the interest rate at seven percentage points above the central bank rate ("five percentage points on average"), which was roughly eight percentage points below commercial bank rates (Klapper, 2005, p. 15). However, NAFIN planned to allow banks to compete on interest rates starting in July 2004, roughly three years after the program began (Klapper, 2005, p. 15). Unfortunately, updated information on interest rates was not available as this document went to press.

Figure 6: The NAFIN Factoring Agreement



NAFIN promotes the *Cadenas Productivas* program and other services for SMEs through its regional centers. Suppliers contact a call center to develop relationships with big buyers. In turn, the buyer provides a list of all their suppliers to NAFIN, which contacts the suppliers to introduce the program and collect information on the SME. Interested SMEs register online or by telephone and open an account with a bank or factor that has a relationship with its buyer. The supplier and NAFIN sign a pre-agreement allowing

electronic sale and transfer of receivables; other documents establish buyer/NAFIN obligations, including the buyer's obligation to remit factored receivables to the banks directly.

As illustrated in Figure 6, once goods have been delivered and the buyer has been invoiced, the buyer posts a negotiable document online. The supplier accesses the buyer's Web page on the NAFIN Web site (www.nafin.com), and locates his or her receivable, along with a list of lenders with a relationship to the buyer and supplier who are willing to factor the receivable, with their corresponding interest rate quotes. Once the supplier clicks on the preferred lender, the amount to be factored — generally 100 percent of the value of the receivable — is transferred electronically to the supplier's bank account. When the invoice comes due, the buyer pays the lender/factor directly.

B2d. Results

As of 2004, the NAFIN *Cadenas Productivas* program had helped established productive chains with 190 big buyers and 70,000 SMEs. Approximately 20 banks, independent finance companies, and other domestic lenders were participating in the factoring program, and NAFIN had provided in excess of $9 billion in financing, with monthly factoring volumes of more than $600,000. Since the program began, NAFIN has brokered more than 1.2 million transactions (98 percent by SMEs) at a rate of approximately 4,000 per day. The electronic factoring program also had a significant impact on the development bank itself. "In December 2000, NAFIN reported assets of $23.9 billion and a deficit of $429 million" (Klapper, 2005, p. 14). With the introduction of factoring, by 2003, NAFIN was reporting a surplus of $13.2 million, with assets of $26.75 billion (Klapper, 2005, p. 14).

B2e. Key Findings and Lessons Learned

The success of the *Cadenas Productivas* program demonstrates that it is possible to successfully provide factoring without recourse, even to SMEs without credit histories, giving these enterprises the opportunity to increase their cash stock without increasing their indebtedness. It also demonstrates how electronic channels can be used to reduce costs and provide SMEs with greater access to financial and nonfinancial services.

The use of an electronic platform was a critical success factor, allowing NAFIN to achieve economies of scale and provide more affordable, faster services. In 2001 NAFIN had a 2 percent market share; by 2004 the development bank had captured 60 percent of the factoring market. It is important to note, however, that the subsidy provided by NAFIN is a key factor in making this program cheaper than commercial factoring.

The existence of a supportive legal and regulatory environment was also a key success factor. Mexico has electronic signature and security laws that should serve as models for other countries (Klapper, 2005, p. 17).

B2f. Prerequisites for Replication

Several countries are considering replicating the NAFIN model, including a development bank in Venezuela. As suggested above, the key factor for replicability seems to be a supportive enabling environment for electronic transactions. Electronic factoring requires laws that give data messages the same legal standing as written documents. While it is possible to do factoring without an electronic system, this increases the costs of the service.

B3. Zambia Production, Finance, and Improved Technology (PROFIT) Program

Zambia, a nation of 12 million people dispersed throughout a country about the size of Texas, faces innumerable challenges in bringing the roughly two-thirds of its population living on less than a dollar a day out of poverty (United Nations Statistics Division, 2009). Credit to the private sector, a prerequisite and a barometer for growth potential, represented just 8 percent of GDP in 2008, far lower than neighboring countries, and it is estimated that less than 2 percent of Zambians have ever had a formal loan (Dougherty, 2009, pp. 3-5). The USAID-funded Zambia PROFIT program seeks to "increase the long-term competitiveness and growth of rural economic activities in Zambia while assuring that a growing number of MSMEs contribute to and benefit from the growth progress" (Woller, 2007, p. 1). As part of a multipronged approach to value chain competitiveness, which includes value chain upgrading, facilitating direct and indirect VCF, and providing TA and training to value chain actors and finance providers, PROFIT has begun to make progress in increasing value chain competitiveness and smallholder farmers' access to credit.

B3a. Background and Environment

Box 8. Zambia at a Glance

Total population: 11.8 million
Life expectancy at birth: 38.63 years
GDP: $17.39 billion (2008 est.)
GDP Growth rate: 5.8% (2008 est.)
GDP per capita (public-private partnership): $1,500 (2008 est.)
Agricultural contribution to GDP: 16.7%
Inflation rate: 11.8% (2008 est.)
Mobile phones: 2.639 million (2007)

Source: Central Intelligence Agency, 2008b

Despite the fact that agriculture employs nearly 85 percent of Zambia's workforce, agriculture represents only 17 percent of its GDP, reflecting the very low productivity of the sector (Central Intelligence Agency, 2008b). Small- and medium-sized farmers and other enterprises have very limited access to formal, or even informal, sources of credit. Limited competition between banks and the availability of high-yield, relatively low-risk government treasury bonds have limited the incentives of most lenders to expand their services to riskier clients, such as agricultural borrowers (J. Dougherty, personal communication, February 25, 2009). However, a handful of banks, some of which are new to Zambia, have begun exploring agricultural lending in the last few years, which will hopefully demonstrate opportunities for profitable lending to the sector and foster competition among banks (NCB/CLUSA, 2008, p. 23). The wide geographic dispersion of Zambia's population is also a factor that restricts the provision of credit and other financial services, such as leasing, insurance, and retail banking. The high transaction costs associated with marketing and monitoring loans and collecting

repayment in rural areas further impede banks' desire to lend to rural and agricultural borrowers.

B3b. Objectives

The PROFIT program sought to strengthen the competitiveness of several Zambian value chains, including cotton, beef cattle, and retail services, by identifying constraints and inefficiencies within the value chains and by pursuing interventions that would bring actors together into more efficient and effective relationships. The program concentrated on several strategies for value chain upgrading, but its principal objective for the project's financial services component was to increase access to credit and decrease transaction costs for central value chain actors and firms. This objective benefits smaller actors by increasing the services that these firms provide and improves efficiency throughout the value chain.

Box 9. Using a Market Facilitation Strategy to Increase Farmer Access to Quality Inputs

Farmers in the remote areas of Zambia have traditionally lacked access to quality input supplies such as hybrid varieties of seed. Farmers would either have to travel great distances to purchase inputs from regional suppliers or wait for a trader to come to their village to purchase inputs marked up by as much as 50 percent. The expense required to provide inputs directly to the remote small farmers caused input firms to ignore this vast market and focus instead almost exclusively on large commercial farmers. To address this inefficiency, the PROFIT program helped create a network of rural agents, selected from within each community, who would help to collect and bulk orders from rural farmers for input supplies. Operating on a commission basis, the agent would arrange delivery of the product once a sufficient quantity was pre-ordered. All of Zambia's major input firms adopted this model and the now 1,500 rural agents have surpassed $1,000,000 in sales. The increased competition in rural areas has led to lower prices for farmers, the increased provision of TA to demonstrate products' effectiveness, and increased yield for farmers of between 30 to 50 percent.

Source: Mwewa and Hesse, 2009.

B3c. Approach

The PROFIT program approach to value chains included two main components: the value chain analytical framework and market facilitation. The value chain analytical framework was used to identify and target "competitive, high potential industries that include large numbers of SMEs that can produce broad-based economic growth" (Woller, 2007, p. 3) and to develop an in-depth understanding of the structure and dynamics of the value chain that would inform their strategy for interventions and upgrading opportunities. PROFIT's strategy of serving principally in a market facilitation role is intended to strengthen the value chain's competitiveness, without the project becoming an actor in the chain itself and thus distorting dynamics and preventing its interventions' sustainability. Its guiding principles for market facilitation are that "all interventions have to be tied back to PROFIT's purpose for intervening," that interventions should first look for "light touch" solutions and only consider more intensive interventions, such as providing contract funds directly when absolutely necessary, and that all interventions have a clear exit strategy from the beginning (Woller, p. 6).

Most of PROFIT's activities and interventions are done through its market facilitation approach, such as encouraging and supporting vertical and horizontal value chain linkages between actors within the chain and outside firms.

The PROFIT program originally intended to strengthen and support direct VCF or informal lending between actors in a value chain. However, after assessing various value chains and the existing financial arrangements within them, the project realized that the main impediment to value chain competitiveness was not the lack of direct VCF. In fact, in-kind credit was already being provided in several value chains, though the process was not transparent and the power relationships governing the financing were heavily tilted toward the large firms that provide the credit (J. Dougherty, personal communication, July 20, 2009; Dougherty and Fields, 2007, p. 1). The PROFIT program decided to instead focus its attention on facilitating indirect, formal credit to the value chains' most central actors, such as retailers, veterinarians, and lead firms. The increased credit and TA provided to these firms allowed them to more cost-effectively market their services to smallholder farmers, who were in need of their services (Dougherty and Fields, 2007, p. 1). PROFIT's activities and interventions are wide-ranging across the financial sector and include activities such as bank trainings and deal brokering; below, we highlight two initiatives — in leasing and mobile phone banking.

Following an assessment of the cotton value chain, PROFIT identified a major inefficiency affecting numerous small cotton farmers. The assessment found that cotton and other field crops were producing very low yields largely because seeds were sowed too late in the season. Upon further investigation, it was learned that this delay was due to the unavailability of tractors to plow the fields, since only a handful of farmers owned tractors and would plow the fields of neighboring farmers for a fee (J. Dougherty, personal communication, July 20, 2009).

To address this inefficiency and increase production for farmers and the chain's competitiveness, the PROFIT program sought to introduce leasing services to "emerging farmers," generally defined as having between 10-60 hectares of land and who could secure leases for tractors and provide tractor services to other farmers, including smallholders. However, numerous obstacles needed to be overcome before leasing would be a viable option. Although leasing was already available for large equipment or fleets of vehicles, banks and leasing firms were inexperienced with leasing to agricultural firms and lacked an understanding of the market and the agricultural cash-flow process, causing them to be extremely risk-averse. Additionally, the geographic dispersion of rural farmers increased transaction costs associated with marketing and monitoring leases, making the arrangement less attractive to farmers and lessors alike. Furthermore, Zambia's value-added tax (VAT) code was not well-suited for leasing, as the entire VAT was due upfront by the lessor, who in turn passed the expense along to the lessee in the form of a higher down payment. This negated one of the advantages of leasing: avoiding a large upfront payment (J. Dougherty, personal communication, July 20, 2009).

The PROFIT program sought to overcome these challenges by facilitating a linkage between banks or leasing companies and creditworthy farmers in desperate need of tractors. After failing to generate sufficient interest and commitment from banks and leasing companies, the project developed a "vendor agreement model," which shifted the incentives of signing leases to equipment suppliers, who would benefit by providing equipment to farmers through leasing arrangements with financing from third-party

institutions (NCBA/CLUSA, 2008, p. 24). The PROFIT program trained a local Zambian staff member to work with the equipment firms to help them assist potential clients in completing lease applications. These equipment suppliers formed relationships with banks and leasing companies, to whom PROFIT also provided TA in evaluating potential agricultural leases. Through the use of vendor agreements, equipment suppliers identified and referred appropriate leasing clients to the banks and nonbank leasing companies, reducing the transactional costs of marketing to and screening potential clients while increasing the equipment suppliers' customer base. PROFIT also drafted leasing laws addressing the VAT treatment of leased equipment and other issues for the government of Zambia, which are currently pending in Zambia's parliament (J. Dougherty, personal communication, July 20, 2009).

Through the same intensive analysis of the cotton value chain, PROFIT identified another inefficiency affecting smallholder farmers: high transaction costs associated with large buyers paying the small contract farmers. A Zambian firm, Mobile Transactions Zambia (MTZL), approached the PROFIT program around this time with an idea to provide SMS-based payment services, which had the potential to greatly lower the transaction cost of buyers paying farmers. PROFIT provided TA and information to the firm about the size and composition of the system's potential market. PROFIT, recognizing the potential impact of this private-sector endeavor, also provided a $115,000 grant to MTZL to expand its operations, and helped link the firm with investors. The MTZL system is now operational, providing mobile transfer and payment services to un-banked rural farmers through a network of payment kiosks (NCBA/CLUSA, 2008, p. 25). Farmers receive their payment via their mobile phone or a "receipt issued at the time of product or service delivery to the lead firm" (J. Dougherty, personal communication, February 25, 2009). The system improves the large buyers' ability to maintain accurate record-keeping and track the prices they pay as well as the quality and volume of cotton they receive from each farmer, improving the buyers' ability to make educated market decisions and increasing their competitiveness in an increasingly tough market. Additionally, the system has eliminated the need for local buyers and farmers to travel with substantial amounts of cash, improving security of transactions (J. Dougherty, personal communication, February 25, 2009).

B3d. Results

The PROFIT program's experience in promoting leasing in Zambia has not been without difficulties, but through persistence and constant innovation, the leasing initiative is finally beginning to gain traction. Early in the program, PROFIT facilitated arrangements with a local leasing agency to promote leasing to the agricultural sector. Despite initial interest and investment from five farmers, the company failed to honor the deals and still has not returned the farmers' deposits, forcing the farmers to seek redress in the court system. However, the project's recent focus on promoting vender agreement models, which put the impetus of deal-making on equipment suppliers, not financial institutions, is beginning to show progress. By the end of 2008, three leasing deals worth nearly $250,000 had been made. While all of these leases were with large commercial farmers, it is hoped they will pave the way for smaller, "emergent" farmers who are currently awaiting decision on their lease applications. The program has also sought to make

changes to Zambia's legal and regulatory environment to make it more conducive to leasing. PROFIT assisted in drafted new leasing laws that address the tax treatment of leased equipment; these are pending in the Zambian Parliament.

The mobile transfer and payment system, rolled out in 2007 by a Zambian information and communications technology (ICT) company, started with six rural agents with 580 transactions processed, 135 of which were payments to farmers. Following its initial success and the formal approval from the Bank of Zambia, the company quickly expanded the program and now has 120 rural agents and 58 sales staff "deployed across rural Zambia to start generating business" (NCBA/CLUSA, 2009, p. 4). MTZL is also using the same technology to provide market information services to farmers and has worked with several large out-growing firms to fully integrate their payment system. The PROFIT program is also exploring the possibility of using the e-payment platform as a way to monitor and track a voucher system that would replace the government's current agriculture inputs subsidy program. Under this proposed system, the government would issue vouchers to poor farmers that could be redeemed for inputs from private vendors. This would eliminate the need for the government to directly distribute the inputs to the farmers and would prevent losses and theft that occur under the current distribution program (J. Dougherty, personal communication, February 25, 2009). The prospect for MTZL's continued growth has recently been bolstered by an equity investment by one of Zambia's largest agricultural firms, with other possible investors expressing interest (J. Dougherty, personal communication, February 25, 2009).

B3e. Key Findings and Lessons Learned

In attempting to increase the competitiveness of rural economic activities and SMEs in Zambia, the PROFIT program has deployed a multipronged approach centered on the principle that all activities should be done with incremental levels of intervention and a clear exit strategy for sustainability. The challenging environment in Zambia, including the historic lack of interest of the country's financial institutions in financing agricultural borrowers, required the PROFIT project to take a very hands-on approach in facilitating transactions while trying to avoid distorting the market by becoming an actor in it themselves.

The project's financial component is continually evolving to respond to new opportunities, such as banks being receptive to training in agricultural lending practices. As demonstrated by the project's early failure in leasing (i.e., when the leasing firm failed to honor its agreements), the PROFIT program has found that trial-and-error and assessing and learning from previous experiences are particularly important in the Zambian context. The program has recognized that the market has to be ready for any potential programs or activities and has based its implementation strategy of "light touch" market facilitation on the premise that the market should always be leading the way, such as in the example of MTZL wanting to explore a new market for SMS technology. This requires flexibility in their programming to seize opportunities and to adjust program activities to meet different levels of demand and interest from stakeholders.

B3f. Prerequisites for Replication

Zambia, which ranks 165th out of 177 countries in the 2007/2008 UNDP Human Development Report, is one of the most challenging business environments in the world, making the PROFIT program's successes particularly remarkable and encouraging. The program's successful efforts to support leasing and the e-payment platform, as well as their other work strengthening value chain competitiveness, demonstrate the effectiveness of their strategy and provide guidance for other programs operating in very difficult economic environments. The project's focus on playing a "market facilitation" role with clearly defined interventions and exit strategies has allowed PROFIT the flexibility to respond to the market's demands and to pursue multiple small interventions, while providing additional support only to stakeholders and programs that demonstrate the most interest and potential.

PROFIT's support to rural leasing is an excellent example of the program's flexibility. Following difficulties working with largely disinterested banks and leasing companies, the program identified a way to incentivize the retail sector to drive the leasing process by using vender agreements. This strategy can be applied elsewhere to catalyze leasing programs when banks or leasing companies are not initially interested or lack the resources to market and screen clients in remote rural areas. As discussed in greater detail in Annex B, leasing can be a valuable tool for financing the acquisition of productive assets, but requires a regulatory framework that retains the legal right of ownership with the lessor and allows for the repossession of an asset if necessary. VAT regulations are often prejudiced against equipment purchased for leasing, and may need to be reformed prior to the growth of a leasing market. While PROFIT managed to facilitate several leasing arrangements under the existing legal framework, the program's efforts to reform the tax law could further bolster the attractiveness of leasing.

Box 10. Mobile Phone Banking in the Philippines

The USAID-funded Microenterprise Access to Banking Services (MABS) program promoted the use of mobile phone technology to extend banking services to remote areas of the Philippines. Transactions reported by MABS-participating rural banks soared almost 400 percent in terms of volume and over 500 percent in value from 2006 to 2007. As of December 2007, 500,000 active users were sending and receiving more than $100 million per month in electronic money transactions.

The wide-scale use of mobile phones throughout the developing world has made mobile banking a viable solution for providing banking and payment services to rural populations not served by traditional financial institutions. Basic prerequisites for mobile banking include a solid core banking system or management information system (MIS) that is robust, reliable, and flexible. Such a system ensures transactions can be processed accurately and in real-time; an accessible telecommunications network that reaches target clients in remote areas; and affordable ICT-enabled devices to ensure access for the poor. The banking regulatory environment should have well-defined, or at least flexible, rules for e-payments, requirements for opening accounts, the security of transactions, and consumer protection. Rules and procedures governing the use of electronic transactions, as well as procedures for testing security approaches, should be in place. One of the most critical actors in a mobile banking network designed to reach poor and rural communities is a network of service points (or nonbank "agents") who provide the transaction services in

remote and rural areas where bank branches do not exist. The network of agents can be MFIs, beverage distribution agents, the postal service or other networks already in the business of handling cash. These agents serve as a "cash-in/cash-out" location for the clients as well as a place for clients to register for the mobile banking service. In the case of MTZL in Zambia, the Total Service Station Network served as nonbank agents supporting the cash-transfer system.

B4. Buyer Contracts Facilitate Financing for Soybean Farmers in Paraguay

The high transaction costs associated with geographically dispersed clients and the real and perceived risks of agriculture lending limit access to finance in rural environments. For farmers who grow a single crop, the perceived risk is even higher because the absence of diversified production makes the farmer's income, and therefore repayment capacity, particularly vulnerable to price fluctuations, weather, and plagues (Wittlinger and Tuesta, 2006, p. 1). Despite these challenges, Financiera El Comercio, a regulated nonbank financial institution (NBFI) in Paraguay, has formed unique, strategic relationships with farmers and silo operators that have enabled it to identify creditworthy clients, mitigate risk, control transaction costs and expand its agricultural lending portfolio by providing financing to small-scale, single-crop, soybean farmers. Not only were these loans profitable, they provided opportunities to build relationships and credit histories with farmers and further developed El Comercio's experience and expertise in rural financing (Wittlinger and Tuesta, 2006, p. 10).

Box 11. Country General Information Economy: Paraguay (2007)

Total population: 6.1 million
GNI per capita (Atlas): $1,710
Agricultural contribution to GDP: 25%
Agricultural growth rate: 4%
Rural population: Approx. 30%
Main crops: Soy bean, maize, cotton, mandioca, wheat

Source: The World Bank Group, 2009.

B4a. Background and Environment

Agriculture is a critical part of the Paraguayan economy, representing approximately 25 percent of the country's $12.2 billion GDP and employing 31 percent of the national workforce (Central Intelligence Agency, 2008a). Soybean is Paraguay's main agricultural commodity, as well as the country's largest export, constituting 22 percent of all exports (The World Bank Group, 2009). In recent years, increasing demand for soybeans has led to steadily increasing prices (Diaz and Hansel, 2007, p. 34). Despite the growth potential, historically, soybean farmers have been able to secure only in-kind credit, mostly from the silo operators who supplied inputs such as seed and fertilizers at between 27 to 35 percent interest annually (Diaz and Hansel, 2007, pp. 33). Farmers would enter into contracts with the silo, pledging to sell their crop after harvest, at which time the cost of the advanced inputs would be deducted from the payment (Wittlinger and Tuesta, 2006, p. 4). The process of contract farming was well established, and the legal environment in Paraguay honored the

Box 12. Financiera El Comercio: 2005 Profile

Headquarters:
Asuncion, Paraguay
Staff: 213
Rural branches: 12
Assets: $18 million
Deposits: $12 million
PAR: 3.09 %
Clients: 27,000 borrowers
6, 572 depositors

Source: The Mix Market, 2009.

contractual arrangements, which prevented side-selling and enabled the enforcement of the contracts.

El Comercio saw an opportunity to expand its agricultural portfolio by providing supplemental financing within the soy value chain. With assistance from ACCION International and the Inter-American Development Bank, El Comercio expanded its lending in rural areas. In 2005, El Comercio sought to further entrench itself in agricultural lending to fulfill its social mission and to further capitalize on previously favorable repayment rates (Wittlinger and Tuesta, 2006, p. 8). El Comercio's team identified soybean farmers as an underserved market with opportunities for future growth and decided to develop financing products appropriate for producers in this value chain. However, small-scale, single-crop farmers heavily dominated the soybean market, which compounded the risks of a systemic failure that would lead to poor performance in the loan portfolio.

B4b. Objectives

El Comercio sought to provide cash loans to farmers to supplement the in-kind financing provided by silos that could be used for other productive and household uses. Before El Comercio could expand into this new market, it needed to develop a mechanism to mitigate the high risk of agricultural lending and to control the costs of identifying creditworthy farmers, monitoring the performance of their loans, and collecting payment.

B4c. Approach

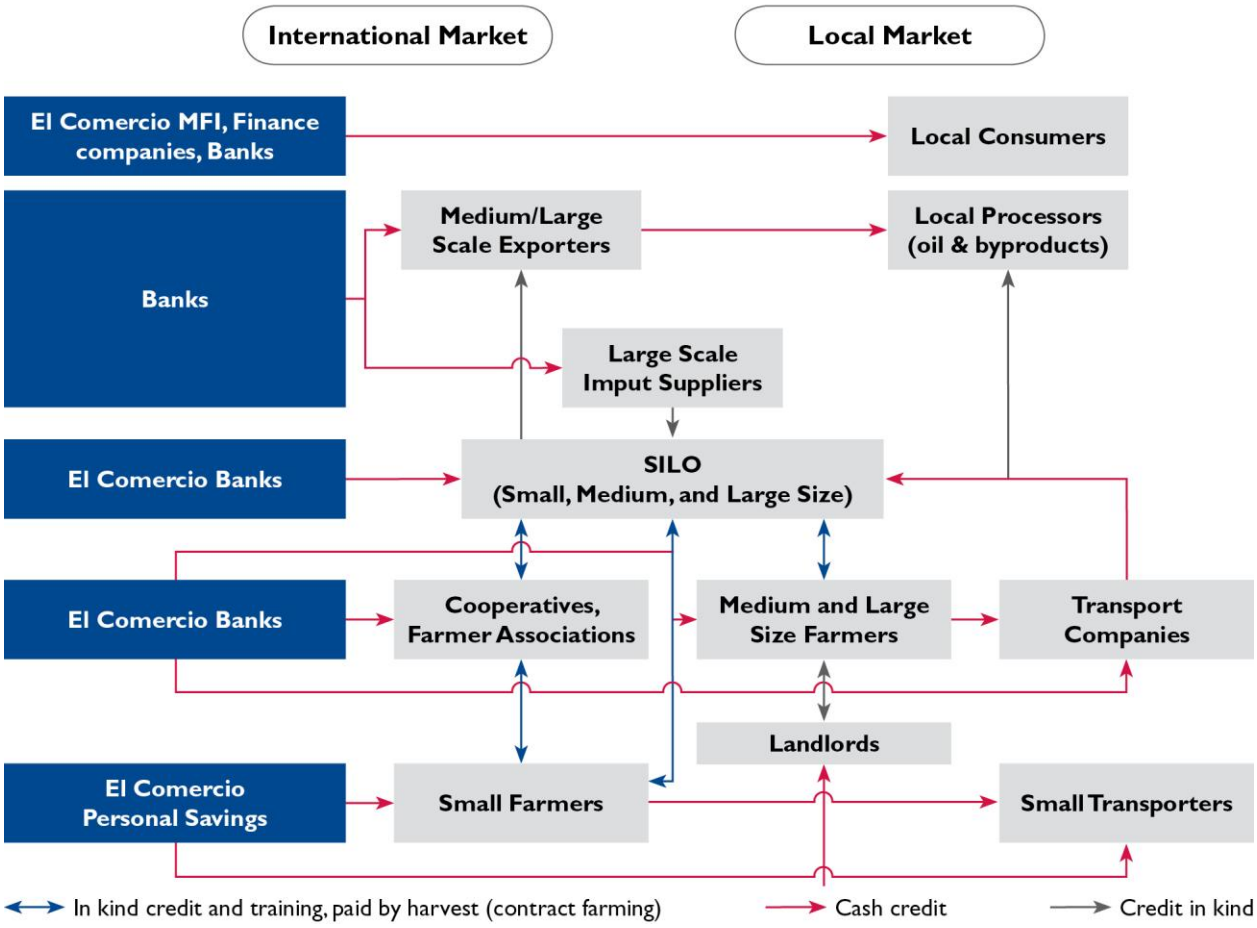
In order to mitigate the risk of these loans, El Comercio set up a strategic relationship with several silos to draw on the their knowledge of farmers' experience and creditworthiness in assessing the risk of the loan. It also set up relationships to share the credit risk of cash loans with the silos by using the contracts buyers use in contract farming arrangements as collateral. Specifically, El Comercio sought to leverage silo management's knowledge and relationships with the farmers by having them assist in identifying those who were in need of additional credit, monitoring the phases of the crop production, and helping collect repayment after harvest, all of which reduced the transaction costs of rural financing (Wittlinger and Tuesta, 2006, p. 5).

Once El Comercio's leadership decided it was interested in developing financing products for soybean farmers, they thoroughly analyzed the soybean value chain to understand how the various actors interact and identify any financing constraints (Wittlinger and Tuesta, 2006, p. 2). Figure 7 presents the soybean value chain, which comprises input suppliers; small, medium, and large farmers; silos; processors; transporters; and exporters. El Comercio discovered that the soybean value chain is strong and well-integrated, consisting of transparent information-sharing, mutually beneficial relationships between actors, and well-developed infrastructure for transport and processing (Wittlinger and Tuesta, 2006, p. 6). The value chain analysis identified that silos were the key actor in the chain, interacting with nearly all other actors. In addition to providing storage for producers' soybeans, silos also provide in-kind financing through formalized contract farming arrangements, deliver training and TA to

farmers, and purchase soybeans for resale further up the value chain (Wittlinger & Tuesta, 2006, p. 4).

While silos were providing in-kind financing to small-scale farmers, El Comercio identified a gap to fill in financing the chain. In addition to the seed and fertilizer being provided, farmers required cash credit to prepare the soil, additional inputs, equipment maintenance and repair, payment for laborers, the purchase or renting of additional farming land, and personal and household needs that arose prior to harvest (Wittlinger and Tuesta, 2006, pp. 4, 9). El Comercio determined that some of the silos, particularly the smaller ones, also lacked adequate access to credit needed to provide profitable in-kind financing to farmers (Diaz and Hansel, 2007, p. 31).

Figure 7: Soy Value Chain in Paraguay

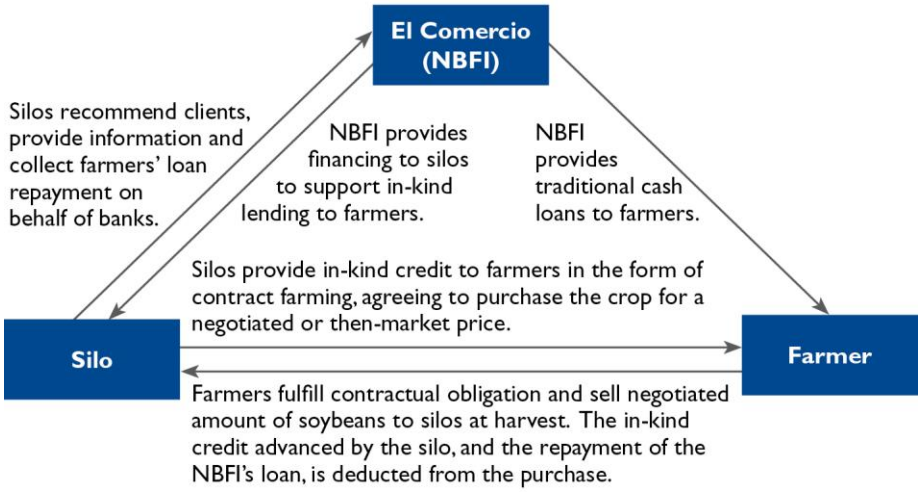


Source: Wittlinger and Tuesta, 2006, p 3.

Of the approximately 50 silos in Paraguay, El Comercio established strategic alliances with 12 that needed financing and that had extensive experience working with small farmers. Through these alliances, the silos continued to provide in-kind inputs to farmers, secured through formalized contractual agreements that committed the silo to purchase the crop at harvest at a pre-negotiated price, a market-variable price, or a combination of the two (Wittlinger and Tuesta, 2006, p. 5). Silos also referred farmers who needed

additional cash financing to El Comercio, which would provide a traditional cash loan to the farmer at around 40 percent interest, with a term that matched the soy production season (S. Mendez and C. Barrios, personal communication, July 3, 2009; Diaz and Hansel, 2007, pp. 32-33). These loans were partially secured by the buyer contracts with the silos or by partial guarantees, which the silos provided on behalf of the farmers. The silos, in addition to withholding the amount advanced to farmers under the contract farming arrangement, would also withhold the loan payment and pay it to El Comercio, providing a collection service that further reduced the cost of the transaction (S. Mendez and C. Barrios, personal communication, July 3, 2009). These contracts served as a form of collateral for the loan and created a risk-sharing arrangement with the silos (Diaz and Hansel, 2007, p. 31).

Figure 8: El Comercio Strategic Alliance System



Source: Wittlinger and Tuesta, 2006, p. 5.

El Comercio performed an independent credit-risk analysis on each farmer but relied on the silos, which had established relationships and credit histories with the farmers, to provide insight into the borrowers' creditworthiness and expertise in farming. Also, because the silos had an interest in protecting their in-kind investment to the farmers, they monitored much of the crop production, eliminating the need for El Comercio to hire costly agricultural specialists to monitor their loans (Wittlinger and Tuesta, 2006, p. 6).

B4d. Results

According to Diaz and Hansel (2007), although El Comercio provided loans with higher interest than the silos, small-scale farmers found the loans attractive because the risk analysis and approval process was quick, partly because the silos provided such reliable credit information about the farmer. The cash loans were also flexible and could be used for "both business and household needs" (Diaz and Hansel, 2007, p. 34). The loan repayments were deducted from the sale of the crop to the silo at the time of harvest; while defaults were infrequent, when they did occur, the silos often provided assistance to the farmer, including paying some clients' debts, offering additional guarantees for

their eventual repayment, and continuing to provide in-kind financing so the farmer could generate income the next season to repay the loan (Diaz and Hansel, 2007, pp. 35).

In the first three years of the strategic relationship system, El Comercio disbursed 2,959 loans, primarily to small soybean farmers, and 246 loans to medium-sized enterprises, with loan portfolios totaling $1.8 million and $4.8 million, respectively (Diaz and Hansel, 2007, p. 35). The strategic relationships formed with the value chain's key actor, silos, enabled them to easily identify potential, creditworthy clients, and helped control costs for loan monitoring and collection, allowing El Comercio to expand its rural and agricultural lending portfolio while minimizing defaults and risk (Diaz and Hansel, 2007, p. 35).

B4e. Key Findings and Lessons Learned

El Comercio's value chain analysis and mapping, developed through site visits and interviews with each actor in the chain, was a critically important first step before it initiated its lending program. The analysis evaluated opportunities within the soybean market, identified relationships between chain actors, including financing and information flows, and determined existing financing gaps to fill. Additionally, the analysis provided the framework for the strategic alliance model with silos, the key participants in the chain that served as the hub for most loan transactions.

The El Comercio model demonstrates the opportunities for leveraging existing value chain relationships to reduce costs for the lender and mitigate the risk of lending to a single-crop farmer. By designing loan products that matched the soy crop cycle and supplemented existing forms of input credit rather than creating a product substitute, El Comercio provided a product that was in high demand by farmers, strengthened existing value chain relationships, and improved farmer and value chain competitiveness.

Each value chain is different — even within the same region — and what works for one may not work for another. Following its success with soybeans, El Comercio expanded its lending into other crops, such as sesame, tobacco, and cotton. It tried to replicate the soybean strategic model with these crops, but quickly learned that their value chains were not as strong and well-integrated as the soy value chain. The tobacco value chain, for example, was much weaker, and the silo operators were not providing many of the critical functions as in the soybean value chain (e.g., providing adequate TA to farmers, paying farmers agreed-upon prices at harvest, and helping El Comercio recover loans).

B4f. Prerequisites for Replication

The El Comercio strategic alliance model benefited from many unique circumstances of the soybean value chain in Paraguay that are not always present in other countries. For example, there was an established process of contract farming between silos and farmers and a legal environment in Paraguay that honored the contractual arrangements. Such an environment prevented side-selling and enabled the collateralization of loans (Wittlinger and Tuesta, 2006, p. 6). Additionally, the soybean silos enjoyed strong, well-established relationships with the farmers that allowed them to provide quality borrower

recommendations and closely monitor the production cycle on behalf of the financial institution. The strong competition among the many silos in Paraguay also provided an environment in which silo owners were interested in entering into strategic alliances with El Comercio as a way to attract farmers' business with the additional loan services they provided (Diaz and Hansel, 2007, p. 32).

While the growing demand for soybeans internationally helped ensure price stability and reduced the risk of farmers defaulting due to low profits, single-crop farmers in other value chains may be vulnerable to volatile price fluctuations, which make loans based on contract farming much more risky. Similarly, the geographic and climatic conditions favorable to soybeans and the short production cycle further reduces the risk for loans to soybean farmers and allows for less risky, shorter-term loans. Crops with longer production cycles represent increased risk to lenders.

C. Concluding Remarks

Based on the fundamentals for integrating finance into the value chain approach and the findings of the case studies, program designers and implementers interested in supporting VCF interventions can draw a number of conclusions. These key considerations for programming and prerequisites for replication can be supplemented with existing tools as described in Section C2 to assist in the various facets of program design and implantation.

C1. Key Programming Considerations and Prerequisites for Replication

Some of the key considerations for designing and implementing VCF interventions include:

USAID's Role

- Programs should serve as a facilitator and catalyst to instill sustainable processes, products, and services for expanding value chains and identifying incentives. Even if a hands-on approach is required to facilitate initial transactions, it should be structured so the program does not become an actor in the market, which can distort the market.
- USAID can play a critical role in addressing information asymmetries in market information, such as credit supply and demand studies, to ease market entry for financial institutions and reduce their risk. Stakeholder workshops can be an invaluable communications mechanism for collectively identifying and disseminating profitable business opportunities within value chains and for assisting financial institutions in understanding both market analysis and appropriate product and service design.
- Value chain analysis and mapping, developed through site visits and interviews with each actor in the chain, is a critical first step to take before initiating VCF activities. This analysis will identify market opportunities within value chains, relationships between chain actors, including financing and information flows, and existing financing gaps.

- A supportive legal and regulatory environment must exist. To achieve scale, certain factors must be addressed either before or concurrently with other VCF interventions. Fundamental constraints such as a poor regulatory or policy environment or volatile price fluctuations need to be tackled through USAID and/or other technical support programs for VCF activities to succeed in the long term. For example, financing for value chain participants using leasing, WHRs, or factoring arrangements will not achieve scale unless conducive tax regulations and the ability to assign receivables are in place.
- Many of the examples provided in this document relate to financing for cash crops for export, but the approaches and techniques can be replicated in other value chains, including food commodities such as maize.

Working with Financial Institutions

- Lenders are looking for organized and integrated value chains that provide critical quality control, TA to farmers, and market-making functions. USAID can play an important role in helping organize and integrate value chains to induce financial institutions to provide financing by supporting partnerships and by strengthening inter-firm cooperation.
- Donors should require financial institutions to use their own capital to extend loans at commercial rates of interest, thus ensuring the availability of future loan capital for value chain participants. USAID's DCA guarantees can provide a very useful risk-sharing incentive to achieve this goal, stimulate lending to value chain participants, and reinforce other VCF initiatives.
- Value chain financing provides opportunities to strengthen and leverage existing value chain relationships to reduce costs for the lender and mitigate the risk of lending to participants at all levels, but particularly at the bottom of the value chain. Strong, well-established relationships allow improved borrower selection, monitoring, and repayment rates.
- Strong competition among middle-level value chain participants can foster interest in entering into strategic alliances with financial institutions, which can attract farmers with the additional loan services they offer.
- If financial institutions are not initially interested or lack the resources to market and screen clients in remote rural areas, it is possible to explore work-around solutions, such as PROFIT's use of vender agreements to catalyze leasing.

Financial product and Service Design

- Financial products and services for value chain participants must match the maturities and other terms to the crop and business cycle and, at the production end, allow households to meet other cash flow needs.
- Crops with longer production cycles represent increased risk to lenders.
- Single-crop farmers may be vulnerable to volatile price fluctuations, making loans based on contract farming much riskier.

- Designing products in environments with an established process of contract farming and a legal and social context that honors contractual arrangements reduces or prevents side-selling and enables the collateralization of loans.
- Electronic channels and technology, such as mobile banking, can be used to reduce costs for lenders and borrowers, providing value chain participants greater access to financial and nonfinancial services. For example, while it is possible to establish factoring arrangements without an electronic system, doing so increases costs.

C2. Tools and Resources for VCF Activities

From USAID's and other donors' work in the area of value chain development and VCF, there are a number of tools and resources that program designers and implementers considering these types of interventions can use. As part of this FS Series, a diagnostic checklist (see Annex D) can assist programmers in determining whether or not a VCF intervention is appropriate for their development objectives. The diagnostic checklist is accompanied by a MSOW (see Annex E), which provides sample language on the objectives, key tasks and activities, and notional indicators for VCF programs or interventions.

USAID has tools and formats for conducting value chain analysis. See the USAID value chain wiki at http://apps.develebridge.net/amap/index.php/Value_Chain_Development.

The most current literature on including finance in value chain analysis has been cited within this document and can also be found on microlinks of the USAID VCF wiki at http://apps.develebridge.net/amap/index.php/Value_Chain_Finance.

For general business- and agribusiness-enabling environment issues, the tools and knowledge provided by the USAID BizCLIR Project will be a useful starting point. See www.bizclir.com.

The assessment tools have questions that can be integrated into a value chain analysis exercise, and completed assessments, if recent enough, can be used as background to inform analysis and design. These include BIZCLIR, AgBIZCLIR, and MicroCLIR. USAID's Office of Microenterprise Development, in cooperation with the Office of Agriculture, undertook a significant effort in designing and delivering Rural and Agricultural Finance (RAF) trainings, which include VCF tools and interventions. The RAF materials can also be found on microlinks.

ANNEX A. GLOSSARY

Business Enabling Environment. "Includes norms and customs, laws, regulations, policies, international trade agreements and public infrastructure that either facilitate or hinder the movement of a product or service along its value chain."[2]

Capital. "Measure of the accumulated financial strength of an individual, firm, or nation, created by sacrificing present consumption in favor of investment to generate future returns above investment costs."[3]

Debt. "Obligation to pay money, deliver goods, or render service under an express or implied agreement. One who owes, is a debtor or debitor; one to whom it is owed, is a debtee, creditor, or lender. Use of debt in a firm's financial structure creates financial leverage that can multiply yield on investment provided returns generated by debt exceed its cost. Because the interest paid on debt can be written off as an expense, debt is normally the cheapest type of long-term financing."[4]

Development Credit Authority (DCA). Provides partial credit risk guarantees to private- sector lenders to encourage the provision of credit to financially viable businesses and projects that contribute to development goals. There are four basic DCA guarantee structures, but DCA loan portfolio guarantees (LPGs) have been used the most frequently for VCF activities. An LPG provides up to 50 percent coverage on net principal losses by a private-sector lender to borrower group specified by USAID. The purpose of an LPG is to encourage a lender to extend credit to borrowers, such as local governments, that are underserved by the financial sector.

Direct VCF. Financial flows between value chain actors. For example, a processor may provide cash or in-kind credit to a small farmer producing mangoes for the company. The credit is repaid when the mangoes are delivered to the processor.

End Market. "Indicates where the final transaction takes place in a value chain. Typically it is where the end-user is located, meaning the individual or organization for whom the product or service has been created, and who is not expected to resell that product or service."[5]

Equity. "(1) Ownership interest or claim of a holder of common stock (ordinary shares) and some types of preferred stock (preference shares) of a firm. On a balance sheet, equity represents funds contributed by the owners (stockholders) plus retained earnings or minus the accumulated losses. (2) Net worth of a person or firm computed by subtracting total liabilities from the total assets. In case of cooperatives, equity represents members' investment plus retained earnings or minus losses."[6]

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[2] USAID Wiki, http://apps.develebridge.net/amap/index.php/Business_Enabling_Environment.
[3] Business Dictionary Website, 2009. Accessed July 2, 2009, http://www.businessdictionary.com.
[4] Business Dictionary Website, 2009. Accessed July 2, 2009, http://www.businessdictionary.com.
[5] USAID Wiki, http://apps.develebridge.net/amap/index.php/End_Markets.
[6] Business Dictionary Website, 2009. Accessed July 2, 2009, http://www.businessdictionary.com.

Factoring. A type of supplier financing in which firms sell their creditworthy accounts receivable at a discount (equal to interest plus service fees) and receive immediate cash. Factoring is not a loan. It is a comprehensive financial service that includes credit protection, accounts receivable bookkeeping, collection services, and financing.[7]

Indirect VCF. Lending by a financial institution (whether a nongovernmental organization, credit union, or bank) to a value chain member.

Leasing. A method of financing the acquisition/use of fixed assets, predicated on the concept that the value of the asset is in its use in the business rather than through ownership. Leases are typically used to finance equipment, but can also be used for buildings and improvements and are commonly used to finance vehicles.

Line of Credit. Extent to which a seller will extend credit payment terms to a buyer or bank. It is the total of the amounts of (a) unpaid invoices, (b) goods in transit, and (c) orders confirmed but yet to be shipped, or loans.[8]

Public-Private Partnership (PPP*).* A particular form of private-sector participation in the financing and provision of municipal services and infrastructure. A PPP is characterized by private-sector management of the project company with a public entity or municipality retaining a significant stake and sometimes the majority of the share capital of the project company.

Reverse Factoring. Similar to factoring, however the lender purchases accounts receivables from only high-quality buyers, requiring it to collect only credit information and calculate the credit risk from the buyer. In reverse factoring, the credit risk is equal to the default risk of the high-quality customer, and not the risky SME.

Registry. "Government agency that keeps a public register of certain items of information such as company records and land titles, i.e. collateral registry or credit registry."[9]

Side-Selling. Producers selling to buyers other than those with whom they have a contract.

Term Loan. "Asset based short-term (usually for one to five years) loan payable in a fixed number of equal installments over the term of the loan. Term loans are generally provided as working capital for acquiring income producing assets (machinery, equipment, inventory) that generate the cash flows for repayment of the loan."[10]

Upgrading. Activities undertaken at the first or industry level to improve productivity to "respond effectively to market opportunities" or increasing the competitiveness of all

[7] Klapper, L., 2006, page 1.
[8] Investor Words Website, 2009. Accessed June 30, 2009, http://www.investorwords.com/.
[9] Investor Words Website, 2009. Accessed June 30, 2009, http://www.investorwords.com/.
[10] Investor Words Website, 2009. Accessed June 30, 2009, http://www.investorwords.com/.

activities involved in a product's value chain. "There are five types of upgrading at the firm level: process upgrading, product upgrading, functional upgrading, channel upgrading, and intersectoral upgrading."[11]

Value Chain. "Encompass the full range of activities and services required to bring a product or service from its conception to sale in its final markets—whether local, national, regional or global. Value chains include input suppliers, producers, processors, and buyers. They are supported by a range of technical, business, and financial service providers."[12]

Value Chain Analysis. "Process for understanding the systemic factors and conditions under which a value chain and its firms can achieve higher levels of performance."[13]

Value Chain Approach. "Seeks to facilitate changes in firm behavior that increase the competitiveness of the chain and generate wealth for all participating firms[14]" with the aim of contributing to equitable economic growth.

Value Chain Governance. "Refers to the relationships among the buyers, sellers, service providers, and regulatory institutions that operate within or influence the range of activities required to bring a product or service from inception to its end use. Governance is about power and the ability to exert control along the chain..."[15]

Value Chain Finance (VCF). Finance that flows to or among value chain members, including the smallest microenterprises and the largest multinational company. Value chain finance may be direct or indirect.

Venture Capital. Startup or growth equity capital or loan capital provided by private investors (the venture capitalists) or specialized financial institutions (development finance houses or venture capital firms). Also called risk capital.

Warehouse Receipt. A document that provides proof of ownership of commodities (e.g., bars of copper) that are stored in a warehouse, vault, or depository for safekeeping. Warehouse receipts may be negotiable or non-negotiable. Negotiable warehouse receipts allow transfer of ownership of that commodity without having to deliver the physical commodity.

[11] USAID WIKI, http://apps.develebridge.net/amap/index.php/Upgrading.
[12] USAID Wiki, http://apps.develebridge.net/amap/index.php/Chain_Analysis.
[13] USAID Wiki, http://apps.develebridge.net/amap/index.php/Chain_Analysis.
[14] Finance in the Value Chain Framework, USAID Briefing Paper, February 2009.
[15] USAID Wiki, http://apps.develebridge.net/amap/index.php/Chain_Analysis.

ANNEX B. VALUE CHAIN PRODUCT PRIMERS

A. Leasing

A1. Definition

Leasing is an asset financing method in which an asset, such as equipment or a building, owned by one party is provided to another party for productive usage in exchange for periodic payments (IFC). According to Gallardo, leasing "is based on the preposition that profits are earned through the use of assets, rather from the ownership" (Gallardo, 1999, p. 1). Whereas traditional asset financing provides capital up front to the borrower to purchase an asset and requires periodic payments with interest until the loan is fully repaid, leasing does not transfer ownership to the lessee but rather allows them to use the equipment for a fee.

There are two main types of leasing arrangements. **Finance leases** typically extend for most or all of the useful life of the equipment. They require regular lease payments throughout the lease term, which allow the lesser to recover the cost of the asset, as well as interest payments. Finance leases usually cannot be cancelled and typically provide the opportunity for the lessee to purchase the then-depreciated asset at the end of the lease period for a nominal price. This type of leasing is similar to traditional term loans for equipment, but the distinction is that the ownership of the asset is not transferred to the lessee during the lease period (Rozner, 2006, p. 2).

Operating leases are typically shorter in duration and can be cancelled by the lessee. Because the leases do not typically extend beyond the useful life of the equipment, the lessor is able to recover the initial investment through the short-term rental payments and through the final sale of the slightly used asset once the lease period expires (Rozner, 2006, p. 2).

A2. Purpose

Leasing is a viable way for both urban and rural enterprises to acquire productive assets when they lack sufficient collateral, credit history, or access to bank finance to fully purchase the asset. Because ownership of the asset is not transferred to the client, leasing companies can look beyond an enterprise's collateral to cover potential default and can instead consider whether the equipment will generate enough cash flow to cover the payments over the lease's term (Rozner, 2006, p. 3).

Examples of Leasing in Value Chains:

- Processing lines for packaging,
- Vehicles for transporting product
- Building for expanded production
- Harvesting equipment
- Health care equipment for clinics

A3. Key Actors

Typically, there are three principal actors in leasing transactions: an equipment supplier, a lessor, and a lessee. Lessees can include farmers, processors, exporters, and other enterprises in need of machinery, equipment, vehicles, and/or property to increase their

productivity. Leasing institutions can include banks, leasing companies, insurance companies, equipment producers, or suppliers. Leasing companies will sometimes keep an inventory of equipment for leasing, but often the lessee will identify the equipment they wish to purchase directly through the supplier, and then bring in the lessor to help facilitate the transaction by purchasing the item and arranging for its use by the lessee for a regular fee (Fletcher, Freeman, Sultanov, and Umarov, 2005, p.1).

A4. Advantages and Limitations

Leasing can be used to overcome collateral constraints and the absence of long-term financing. Financing the acquisition of assets in rural areas is often constrained by the lack of collateral, as many farmers do not have clear titles to their land and even if they do, many banks will recognize only urban-based property as collateral. Leasing arrangements do not typically require separate collateral because the borrower does not own the asset but rather is using it for a defined period (Nair, Kloeppinger-Todd, and Mulder, 2004, p. 6). In the event of a default, repossessing the asset is much easier than in traditional financing because the ownership has never transferred to the lessee and the lessor does not have to go through the court system (Rozner, 2006, p. 4). For entrepreneurs or small enterprises with limited capital, leasing may be a viable alternative to traditional financing of assets.

USAID-Supported Leasing Company in Armenia

To extend longer-term financing for productive equipment to agribusinesses in Armenia, the USAID Agribusiness Small- and Medium-Sized Enterprise Market Development Program (ASME) in Armenia helped establish the ACBA Leasing company in 2003. In its first three years, ACBA leased nearly 700 pieces of equipment valued at $5.6 million. However, the program faced several challenges in introducing leasing, a new financial tool in Armenia.

Significant training of ACBA's asset managers was required to ensure they could appropriately access the equipment's life span and value, and to make sure maintenance could be locally provided to protect the resale value, a crucial factor in mitigating leasing risk. Additionally, due to the newness of leasing in Armenia, extensive public awareness programs were required to educate potential lessors, governmental officials, and policymakers about the structure and potential benefits of leasing transactions. Credit officers at ACBA Leasing also required substantial training on accessing risk in leasing arrangements.

The program also had to overcome legal and regulatory challenges that were obstructive to leasing. For example, equipment imported for leasing purposes was subject to excessive VAT, increasing the cost of leases. However, through ACBA efforts in educating policy makers on leasing, leased equipment was eventually exempted from VAT. For a more thorough account of the challenges overcome by ACBA and the ASME program, please refer to the microNOTE entitled "Coping with the 'Unexpected' — The Experience of ACBA Leasing in Armenia" (Hakobyan, 2006).

In addition, when rural borrowers are able to secure financing, it is seldom for terms long enough to recover long-term investments. However, because the leasing of productive assets is usually for the full, useful life of the equipment, it is in the lessor's interest that the lessee continue to lease and use the equipment for as long as possible, facilitating financing necessary for longer-term investments (Rozner, 2006, p. 3). Depending on a country's tax laws, there can also be clear tax advantages to leasing as opposed to buying an asset directly. For example, in most countries, all lease payments are considered a business expense and can be deducted from a firm's pre-tax income, as opposed to traditional asset financing in which only the interest payment can be deducted (Rozner, p. 3).

Leasing does have its limitations, however. It is limited to environments in which certain enabling factors are present. For example, according to Nair, et al (2004), the use of "internationally accepted accounting standards … a tax code that is not biased against leasing … a clear property rights regime, adequate creditor protection, and well-functioning asset registries and credit bureaus" are all critical components of an enabling environment conducive to leasing (p. 13). Clear and transparent leasing laws are necessary to establish the rights and responsibilities of lessors and lessees, and to ensure that the lessor's ownership of the asset is protected throughout the duration of the lease. There are several limiting factors that uniquely affect rural leases due mostly to the geographic de-concentration of rural clients. Additional costs are associated with repossessing assets in the event of default, collecting and administering lease payments, and monitoring the use of equipment to ensure that the asset's value is protected. These additional costs are priced into the lease payments and/or the lease's down payment (Rozner, 2006, p. 4).

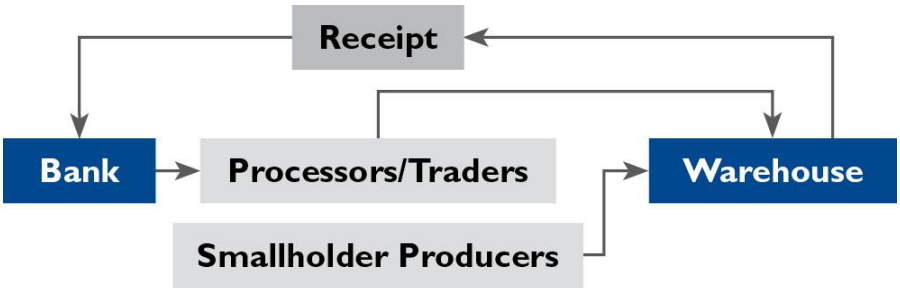
Because a central premise of a lease is the potential for resale of the item in the event of default, improper, inconsistent, or deficient maintenance of leased equipment, especially preventative maintenance to protect the asset's value, is a concern for lessors who need to protect the asset's value in the event of repossession and sale as well as guard against possible defaults due to the loss of cashflow from equipment failure (Rozner, 2006, p. 4). Lessors therefore need to ensure that they "conduct periodic inspections of the leased equipment adherence to a maintenance program and [to assess] the equipment value" (Gallardo, 1999, p. 8). If lessees are widely dispersed, this can add substantial additional costs to leasing companies.

B. Warehouse Receipts (WHRs)

B1. Definition

WHR financing is a collateralized lending mechanism in which commodities are stored in a licensed warehouse that issues a legally binding receipt that can be used as a form of collateral to secure loans. Under the system, producers deposit commodities at a certified warehouse and are given a receipt certifying the quantity and quality of the stored commodity. The receipt is pledged as collateral to a lender, who advances a percentage of the commodity's value to the producer, and places a lien on the goods to ensure that the loan will be repaid as soon as the producer sells the commodity. The responsibility for selling the goods, and the accompanying risk of price variation, remain with the producer. If a producer defaults on the loan, the lender can sell the commodities at the market rates (The World Bank Agriculture and Rural Development Department, 2005, p. 7).

Figure 9: Warehouse Receipt Financing



B2. Purpose

In the highly regulated warehousing system, commodities are securely stored, graded according to quality, and subject to legal regulations governing ownership and sales. This system creates highly liquid assets which serve as good sources of collateral because the banks can determine the assets' market value at the time of the loan and easily dispose of them in the event of default. WHR programs provide crucial operating financing to farmers and producers, allowing them to delay selling their commodities until prices begin to rise as postharvest supply decreases, as opposed to selling immediately after harvest when the market is flooded and prices are lowest (Fries and Akin, 2004, p. 19). Because the stored commodity's ability to hold its value is a central tenant to the system, WHR programs are typically used for staple grains, coffee, and other commodities that are not highly perishable. The financing provides producers with working capital needed in the critical postharvest period, in which loans from the previous season are due and investments for the next season's crops are required.

B3. Key Actors

The principal actors in WHR programs are the commodity producer, the warehouse operator, and the institution extending the financing. However, due to the unique administrative, grading, and monitoring mechanisms critical to the system's functioning, several secondary actors also play an important role. These include inspection and licensing firms and specialists, which ensure consistency of quality across producers' commodities; insurance companies, which protect against theft and natural disaster; and traders, processors, and exporters, who buy the warehoused commodities for their activities further up the value chain.

B4. Advantages and Limitations

In addition to providing farmers immediate working capital that enables them to sell at higher prices, there are other advantages to WHR programs, including promoting quality standards and improving efficiency in purchasing commodities. Warehouses serve as a collection point at which commodities of similar quality from multiple producers are pooled together and sold in bulk to processors, traders, and exporters. The standardization and certification process completed at the time of deposit at the warehouse ensures consistent quality across all producers' commodities, which eliminates the need for buyers and lenders to evaluate the quality of commodities on an individual producer basis

(Fries and Akin, 2004, p. 19). This promotes market efficiencies that filter up and strengthen the overall value chain. However, in order to ensure the stored commodities' consistency of quality, grading standards must be developed, accepted, and trusted (Fries and Akin, p. 19).

Despite the advantages of WHR programs, they are not appropriate in all circumstances. They require a fairly sophisticated enabling environment that provides the licensing, inspection, and legal and regulatory framework necessary for the WHR to serve its intended purpose. Specifically, WHR requires "laws that clarify the rights and responsibilities of system participants and issues related to ownership of warehoused goods, the transferability of receipts, and the use of receipts as collateral" (Fries and Akin, 2004, p. 19). It also requires transparent market information free of government distortion so banks can determine likely market price at time of disposal, in case of default, and can adequately price the risk of the transaction (The World Bank Agriculture and Rural Development Department, 2005, p. 13). Most important, the system requires an network of licensed warehouses that adhere to established standards for grading commodities and are monitored to ensure that they meet "minimum financial, technical, and administrative standards" (The World Bank Agriculture and Rural Development Department, p. 13).

Kenya Gatsby Trust Factoring Program

A nonprofit organization, Kenya Gatsby Trust, has introduced a factoring program to micro and small enterprises (MSE) in Kenya that has enabled MSEs to sell to high-paying formal markets instead of the brokers and middlemen who would pay cash up front, but at much lower prices. SMEs were often unable to sell in formal markets because they lacked the working capital to wait for payment from the buyers, which often required 30-90 days.

The trust requires SMEs to pay a utilization fee for the factoring service, but offers its clients advances on payments of between 70 and 95 percent of an invoice's value at the time of sale to a creditworthy buyer, under the terms that it will collect the payment from the buyer and then remit the remaining amount of the invoice to the seller. This arrangement extends much-needed working capital to the sellers, enabling them to fetch higher prices for their product by tapping into formal markets. An additional benefit is that "it enables MSEs to source from smallholder farmers, who typically require cash payment on delivery, without overextending their working capital. The program currently serves 25 MSEs sourcing from over 4,000 small-scale farmers and artisans."

Source: *Milder, 2008, p. 10.*

C. Factoring/Reverse Factoring

C1. Definition

While traditional financing is often unavailable for these value chain actors, **factoring** is a form of supplier financing that allows a supplier to sells its creditworthy accounts receivables at a discount to an entity (called the "factor") in exchange for cash needed for immediate working capital. The receivable is assigned to the factor at a discount that covers interest and the service fees associated with managing and collecting the receivable (Klapper, 2005, p. 3). Typically, lenders require sellers to assign their full portfolio of account receivables, or at least a minimum number, in order to diversify the risk of the buyer defaulting on the loan (Klapper, 2006, p. 2).

In factoring "with recourse," the supplier retains the credit risk and is responsible if the buyer does not pay the invoice. This type of factoring is most common in emerging markets, where it is more difficult to assess the credit risk of buyers (Klapper, 2005, p.7). Conversely, in factoring "without recourse," the factor assumes the risk of nonpayment

when they purchase the receivable, and they are responsible for collecting payment from the buyer (Klapper, 2005, p. 1). Even under factoring without recourse, factors do not typically advance the entire discounted amount of the receivable to the seller at the time of the transaction, but rather retain a portion of the payment until after the invoice is paid by the buyer. This reserve is used to help cover potential defaults, and creates some risk sharing with the seller (Klapper, 2005, p. 6).

Reverse factoring differs from traditional factoring in that the lender purchases account receivables from only certain very creditworthy buyers, as opposed to purchasing an entire portfolio of account receivables from an individual seller. Reverse factoring is a good solution in emerging markets, where lack of historical credit information, fraud, and a weak legal environment make it difficult to assess risk for numerous buyers in a seller's receivables portfolio. By providing factoring for only the highest-quality buyers, factors are able to minimize risk and can often offer factoring "without recourse" (Klapper, 2005, p. 6). For a detailed example of a successful reverse factoring program, see the case study on the NAFIN reverse factoring program in Mexico.

C2. Purpose

Many producers, processors, and exporters face working capital constraints due to the delay (often 30-90 days) in receiving payment from buyers after their product is sold or shipped (Klapper, 2006, p. 1). This delay prevents the reinvestment of profits into their farms and businesses, the timing of which can be critically important when considering the seasonality of agriculture, in particular. Factoring provides working capital to value chain actors that can be immediately reinvested instead of having to wait for payment from buyers. Because no repayment is required after the time of the transaction, it is not considered a loan, and thus firms secure needed capital without additional liabilities on their balance sheet (Klapper, 2006, p. 1). In addition to providing working-capital financing to sellers, factoring provides accounts receivables bookkeeping and collection services, as well as credit protection from buyer non-payment in the case of factoring "without recourse" (Klapper, 2006, p. 1).

Factoring or reverse factoring can be especially appealing in emerging economies because, like other collateralized products, the transaction's risk is shifted away from the supplier — who is often small, lacking a credit history, and considered high-risk — and, instead, based on the creditworthiness of the buyer, who will ultimately be responsible for repaying the factor (Klapper, 2005, p. 3). Factoring can be particularly useful in environments in which there is a lack of information or credit history with suppliers, because the transactional risk analysis can instead focus on the creditworthiness of the buyers, who are often large, established, creditworthy, international firms (The World Bank Agriculture and Rural Development Department, 2005, p. 9).

C3. Key Actors

There are three actors in any factoring transaction: the seller with an outstanding account receivable that is assigned to the factor in exchange for cash; an institution serving as the factor who is assigned the receivable in exchange for a discounted cash payment to the

seller; and a buyer who holds the accompanying account payable that will eventually be paid to the factor.

Sellers can include producers, processors, exporters, or any other entity that has account receivables and is in need of working capital. Factoring and other forms of trade credit are most common among smaller firms who lack access to traditional working capital financing. Institutions serving as the factor are typically banks and other NBFIs, including specialized factoring firms often associated with export factoring. Because the credit risk in factoring rests with the buyer's ability to pay the receivable, buyers are typically large, creditworthy — and often foreign— firms.

C4. Advantages and Limitations

Factoring can work well in countries lacking a strong business environment and can help develop financial relationships and credit histories where these are lacking. Because factoring does not constitute a loan that carries long-term liabilities, the factor retains the account receivable in the case of bankruptcy of the seller, mitigating the need for strong bankruptcy laws, which are important in traditional finance (The World Bank Agriculture and Rural Development Department, 2005, p. 9). Factoring can also help develop relationships and credit history between lenders and small sellers that can facilitate future traditional, fixed-asset financing. In the case of reverse factoring, large buyers may also benefit by negotiating better terms in future transactions with the sellers in light of the financing being offered (Klapper, 2005, p. 10).

Additionally, factoring requires a relatively less-developed business environment than traditional asset-based collateral financing, which Klapper notes at a minimum requires "secured lending laws, electronic collateral registries, and quick and efficient judicial systems " (Klapper, 2006, p. 1). Strauss notes that a business environment conducive for factoring needs only to include legal codes "governing commercial contracts and the assignment of receivables," a transparent business registry for gauging buyer risk, and regulatory bodies mandated with supervising factoring activities (Strauss, 2005, pp. 1-2).

However, business environment can still be an important consideration in determining the risk of a factoring transaction. For example, if a country has weak contractual enforcement or lacks registries of buyers' historical credit data, the transactional risk increases (Strauss, 2005, pp. 1-2). Additionally, the tax code and accounting rules should treat factoring similarly as other financing transactions, such as allowing associated interest payment to be tax-deductible (as with typical financing) and not applying obsessive VAT or other taxes (Klapper, 2005, p. 12). Particularly in developing countries with weak business environments and opaque credit-history registries, fraud can be problematic in factoring arrangements, as sellers fabricate receivables from buyers that do not exist. In countries where fraud is prevalent, factoring "with recourse" is often used so the seller remains accountable for a buyer's defaults on payment (Klapper, 2006, p. 3).

D. Purchase-Order Financing (POF)

D1. Definition

POF refers to a type of short-term, pre-delivery financing in which companies pledge purchase orders for goods as partial collateral to secure working capital or trade financing to complete the order. The financing is transaction-specific and not to be used for general cash flow purposes, but rather for costs associated with filling the specific order, such as purchasing raw materials and inputs, direct labor and overhead costs, and packaging and shipping. (Jacobs and Gold, 2007, p. 20) The lender either provides the seller with funds for specific purposes or can purchase the required inputs and materials directly from the supplier for the borrower's use. In POF arrangements, the seller submits a purchase order to the lender in exchange for a partial advance to cover the costs of filling the order. Once the goods or service is produced, the account receivable is transferred to the lender, who receives payment from the buyer, deducts the amount of the advance plus interest and fees, and remits the remaining balance to the seller (Jacobs and Gold, p. 10).

D2. Purpose

POF utilizes a purchase order as partial collateral to secure loans that would otherwise require hard assets as collateral, which many small businesses do not have or have already pledged as collateral for other loans. Because it is based on a specific transaction, lenders can principally assess the loan's risk on the basis of the individual transaction and the business' ability to complete the order and the buyer's ability to pay once it is completed. Similar to factoring, POF is intended to shift the transactional risk away from the sellers, who are usually smaller, less creditworthy firms, toward the buyers, who are often further up the value chain, larger, and more creditworthy.

D3. Key Actors

The principal actors in POF arrangements are the seller and the lender offering the POF product. Due to their difficulties in securing lines of credit and other traditional financing, SMEs looking to grow their business find POFs particularly attractive and thus have been the target of POF products introduced in emerging markets. Larger and smaller firms could also potentially access POF. Lenders typically include MFIs and banks or NBFIs that want to expand down-market. Buyers issuing purchase orders may include wholesalers, retailers, and exporters.

D3. Advantages and Limitations

Through POF, businesses can obtain short-term working capital that allows them to increase the number and size of orders and to offer their clients attractive payment terms that would not likely be possible if they had to self-finance the large amounts of upfront capital (Jacobs and Gold, 2007, p. 10). This enables businesses to grow more quickly, because they do not have to wait for profits from past transactions to fund future ones, and assets that can be used as collateral for other financing needs are not tied up. With the additional size and number of orders, a firm can ensure the full utilization of its capacity

to produce existing assets, allowing for growth without necessarily requiring separate financing for additional fixed productive assets (Jacobs and Gold, 2007, p. 10).

From a lender's perspective, POF can be a profitable financial product with manageable risk, assuming adequate information is available about buyers and the POF portfolio is diversified. To further mitigate risk, lenders do not usually finance the entire costs of a particular transaction, but rather around 10 to 40 percent of the transaction's total value (Jacobs and Gold, 2007, p. 11). In addition to the income generated from each transaction, POF also offers lenders the opportunity to establish relationships and build credit histories with businesses that can potentially utilize their other financial products, including fixed-asset financing and lines of credit (Jacobs and Gold, pp. 10-11).

While POF has been successfully introduced in emerging markets, including Armenia, Bolivia, Kosovo, Macedonia, and Moldova, it is a relatively new product that has not been widely tested in developing countries. Key considerations for the replicability of POF programs include the enforcement of contracts and the ability to legally assign the proceeds of the sale to the lender. Additionally, as in reverse factoring, because the credit risk of the transaction ultimately rests on the buyer's ability and intent to pay the firm receiving the loan for the goods or services ordered, lenders require basic credit information about buyers to make informed assessments of the transaction's risk.

ANNEX C. BIBLIOGRAPHY

Campbell, R. (July 2008). Key Elements of the Value Chain Approach, USAID Briefing Paper. Retrieved from http://www.microlinks.org/ev_en.php?id=24002_201&id2-do_topic.

Central Intelligence Agency, (2008a). Paraguay Country Data, CIA Fact Book. Retrieved June 1, 2009, from CIA Web site. Retrieved from https://www.cia.gov/library/publications/the-world-factbook/geos/PA.html.

Central Intelligence Agency, (2008b). Zambia Country Data, CIA Fact Book. Retrieved June 1, 2009, from CIA Web site. Retrieved from https://www.cia.gov/library/publications/the-world-factbook/geos/za.html.

Coulter, J., Onumah, G. et al. (2002). Role of Warehouse Receipt Systems in Enhanced Commodity Marketing and Rural Livelihoods in Africa," *Food Policy, 27*, 319-337.

Djankov, S., McLiesh, C., Shleifer, A. (2005). Private credit in 129 countries. *Journal of Financial Economics*, forthcoming. Factor Chain International.

Diaz, L., Hansel, J. (2007). *Practitioner-Led Action Research: Making Risk-Sharing Models Work with Farmers, Agribusinesses, and Financial Institutions*. SEEP Network.

Dougherty, J. (2009, May). *Value Chain Finance the Hard Way: Lessons from Zambia.* Presentation at the USAID Microenterprise, Learning, Information, and Knowledge Sharing (MicroLINKS) Breakfast Series.

Dougherty, J, & Fields, M. (2007). PROFIT's Four Pronged Financial Services Strategy.

FinMark Trust. (2006). FinScope Zambia 2005, Volume I: Background, methodology and top-line findings, Final Report.

Fletcher, M, Freeman, R, Sultanov, M, and Umarov, U. (2005). *Leasing in Development: Guidelines for Emerging Economies*, International Finance Corporation.

Fries, R., Akin, B. (2004). Value Chains and Their Significance for Addressing the Rural Finance Challenge, USAID MicroReport #20.

Gallardo, J. (1999). *Leasing to Support Small Businesses and Microenterprises*, World Bank Working Paper, World Bank.

Jacobs, G., Gold, M. (2007). Analysis of the Potential for Development of SME Purchase Order Finance Products. USAID Trip Report.

Jansen, A. (2007, December).Value Chain Finance Understanding & Increasing Access: A Concept Paper.

Jansen, A. and Averch, C. (2009, June 18). *4.1 Value Chain Finance: The Framework.* USAID USAID Financial Sector Development In-Depth Course, Washington, DC.

Klapper, L. (2006). *Export Financing for SMEs: The Role of Factoring*, The World Bank Group.

Klapper, L. (2005). *The Role of "Reverse Factoring" in Supplier Financing of Small and Medium Sized Enterprises*, The World Bank Group.

Kristalsky, T. (2006). *Note from the Field: Warehouse Receipts Turn Corn into Collateral.* USAID Uganda Rural Saving Promotion and Enhancement of Enterprise Development (Rural SPEED) program.

Landa, R. (2008). Value Chain Financing in Rural Bolivia; Introducing Purchase Order Financing. Retrieved from http://www.microlinks.org/ev01.php?ID=31688_201&ID2=DO_TOPIC.

Landa, R. Value Chain Financing in Rural Bolivia; Introducing Purchase Order Financing, Powerpoint Presentation, delivered February 6, 2009. Retrieved from http://www.microlinks.org/ev_en.php?ID=24894_201&ID2=DO_TOPIC

Malawi DMS Project. USAID Rural and Agricultural Finance Training, Powerpoint Presentation, delivered May 2007.

Milder, B. (2008) Closing the Gap: Reaching the Missing Middle and Rural Poor through Value Chain Finance, Forthcoming in Enterprise Development and Microfinance, 2008, p. 10.

The Mix Market, Profile for FIELCO. Retrieved June 5, 2009, from http://www.mixmarket.org/en/demand/demand.show.profile.asp?ett=1093.

Mwewa, J. and Hesse, H. (April 2009). Great Choice, Stronger Voice, Note from Zambia, USAID/PROFIT Project.

Nair, A., Kloeppinger-Todd, R., and Mulder, A. (2004). *Leasing: An Underutilized Tool in Rural Finance*, The World Bank.

NCBA/CLUSA, (2008). Zambia PROFIT Annual Report.

NCBA/CLUSA, (2009), Zambia PROFIT Quarterly Report, Second Quarter, 2009.

Onumah, G. (2003). *Improving Access to Rural Finance through Regulated Warehouse Receipts Systems in Africa.* Paving the Way Forward for Rural Finance: An International Conference on Best Practices Case Study.

Rozner, S. RAFI Note #11, Rural Leasing, USAID's Offices of Agriculture and Microenterprise Development, Dec 2006, p. 4.

Stallard, J., Fries, B. (February 2009). Finance in the Value Chain Framework, USAID Briefing Paper.

Strauss, S. (2005). Regulatory Framework for Factoring, Egypt Financial Services Project, Technical Report No. 27,

United Nations Statistics Division, Department of Economic and Social Affairs, United Nations. (2009). *Millenium Development Goals Indicators,* Available at: http://mdgs.un.org/unsd/mdg/Data.aspx

US Agency for International Development. (2008). Finance in Value Chain Analysis-A Synthesis Paper, USAID MicroReport #132.

US Agency for International Development. (n.d.) Using the Value Chain Approach to Design a Competitiveness Strategy, USAID Briefing Paper.

USAID Value Chain Development. (n.d.) Retrieved from the USAID Microlinks Wiki: http://apps.develebridge.net/amap/index.php/Value_Chain_Development

Using the Value Chain Approach to Design a Competitiveness Strategy: Briefing Paper. (2008). Retrieved from: http://www.acdivoca.org/852571DC00681414/Lookup/Competitiveness%20Strategy%20Briefing%20Paper/$file/Competitiveness%20Strategy%20Briefing%20Paper.pdf

Wittlinger, B., and Tuesta, T. (2006). Providing Cost-Effective Credit to Small-Scale Single Crop Farmers: The Case of Financiera El Comercio, *ACCION Insight, 19*.

Woller, G. (2007). Assessing the Impact of PROFIT Zambia in the Cotton, Beef Cattle, and Retail Input Services Value Chains. Baseline Research Report.

Woller, G., Downing, J. (2007). Causal Models as a Useful Program Management Tool: Case Study of PROFIT Zambia, Impact Assessment Primer Series, Publication #5.

The World Bank Agriculture and Rural Development Department. (2005). *Rural Finance Innovations, Topics and Case Studies*. Report No. 32726-GLB. The International Bank for Reconstruction and Development / The World Bank.

The World Bank Group, Paraguay at a Glance. Retrieved June 1, 2009, from http://devdata.worldbank.org/AAG/pry_aag.pdf.

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